Climatological Data for December, 1910.

DISTRICT No. 4, LAKE REGION.

Prof. HENRY J. COX, District Editor.

GENERAL SUMMARY.

The uniformly cold weather of November, 1910, continued with only slight interruptions during December. The cold was general throughout the district, but it was most pronounced in the watersheds of Lake Champlain and the St. Lawrence, where the month was one of the coldest Decembers on record.

The precipitation was nearly all in the form of snow, except in Ohio and Indiana, and while the combined amounts of rain and melted snow averaged much less than usual, more than the usual amount of snow fell in central Upper Michigan and portions of New York State. The temperature was lower and the snowfall greater in the eastern portion of the district than in December of last year—a month which has often been referred to as having ushered in the "old-fashioned winter" of 1909–10. There were no other unusual features, and the following table summarizes the general conditions in the various portions of the district:

Portions of States lying within District No. 4.	Mean.					Number of days.				Prevailing direction of wind.
	Temperature.	Departure from normal.	Precipitation.	Departure from normal.	Snowfall.	0.01 inch or more precipitation.	Clear.	Partly cloudy.	Cloudy.	
Minnesota	12.4	−2.6	0.60	−0.55	8.5	7	11	9	11	nw.
Wisconsin	19.7	−2.4	0.86	−0.80	10.9	6	11	8	12	nw.
Illinois	26.4	−2.9	1.32	−0.75	9.2	11	8	8	15	w.
Indiana	24.1	−3.5	1.95	−0.43	10.8	9	7	6	18	sw.
Upper Michigan	18.3	−1.8	1.76	−0.34	19.8	12	6	6	19	nw.
Lower Michigan	22.3	−4.1	1.75	−0.45	18.0	11	5	7	19	sw.
Ohio	24.2	−5.5	2.14	−0.56	12.2	12	6	7	18	sw.
Pennsylvania	26.0	−5.7	2.89	−0.06	24.0	20	2	6	23	s.
New York	17.8	−6.5	2.78	−0.22	34.2	13	7	8	16	sw.
Vermont	14.7	−8.2	2.49	+0.10	17.4	12	6	6	19	nw.

TEMPERATURE.

The month opened with temperature below the normal in all sections, and it was not until the 14th that there was any appreciable moderation. After that date the temperature was more variable, but it was oftener below than above the seasonal normal. The longest period the temperature remained above the average was from the 26th to the 29th, inclusive. The lowest minimum readings occurred on the 30th and 31st in Minnesota, Michigan, Pennsylvania, New York, and Vermont, while in practically all other sections the lowest readings were observed during the second decade. The lowest temperature noted at any station was −37° at Stephen's Mine, Minn., on the 30th. The highest temperatures occurred on the 14th in the western sections and on the 28th in the eastern sections, the highest for the entire district being 48° on the 28th at several stations in Ohio. At Canton, N. Y., on the 31st, the temperature ranged from a maximum of 24° to a minimum of −30°, the difference being 54°, while on the 30th the range at Northfield, Vt., was 51°, from a maximum of 45° to a minimum of −6°. Almost without exception the daily minimum temperatures were below freezing in all sections during the entire month.

Taken as a whole, the month may be considered one of the coldest Decembers of which there is any record, and in the eastern sections all previous records for low December mean temperatures were broken, the average deficiency in New York State being 6.5° and in Vermont 8.2°. The greatest departure at any place in the entire district was −10.5° at Canton, N. Y., and the average for that station for the first 17 days was 17° below the normal. In other portions of the district the deficiency was not so pronounced, but it exceeded 5° in Ohio and ranged from 2° to 5° elsewhere.

PRECIPITATION.

The total precipitation in the district averaged much less than usual, although there was an excess in a few scattered localities. It was the driest December on record in Wisconsin and Minnesota. In the Lower Lake region and the St. Lawrence Valley the deficiency was not great, the snowfall there being more than usual; in fact, in New York State the snowfall was excessive. In Indiana and Ohio the precipitation was about one-half rain and one-half snow, while in the other sections it was nearly all snow. Along the shore of Lake Superior from Marquette to Whitefish Point the precipitation was greater than usual because of the heavy snows, but this was the only locality in the Upper Lake region where there was an excess of precipitation. While the geographical distribution of precipitation was quite irregular, it was well scattered through the month, although the greatest amount occurred in the third decade.

Where rain fell, it was chiefly on the 23d, 28th, and 29th, and in Ohio and Indiana the amounts on these dates equaled approximately half of the total monthly precipitation.

Snow.—The storm of the 28th in Chicago and vicinity was accompanied by snow unusually wet, there being a water equivalent of 0.71 inch in the 4 inches of snow which fell on that day. This storm caused considerable delay to traffic and much damage to telephone and telegraph lines. On the 30th much injury was caused by snow and ice to various electric lines in northern Ohio. In the New York section the snowfall averaged about 3 inches more than that of December, 1909—a month which surpassed the records for many previous years. The greatest total fall was 59 inches, at Adams Center, N. Y.

The ground remained covered throughout the month in all sections, the greatest depths being in the eastern Lake Superior region and portions of New York State.

ICE IN RIVERS AND HARBORS.

In Duluth Harbor the ice increased in thickness during the month from 7 inches to 16 inches, and in the harbor of Green Bay approximately similar conditions obtained. At various points along the shore of Lake Superior the thickness of the ice ranged from 6 inches at the beginning of the month to 20 inches at the close, but ice did not form in Marquette Harbor until the 26th. Along the west shore of Lake Michigan the ice was from 6 to 10 inches thick, except that there was no ice of consequence in either the Milwaukee or Chicago Harbors. In Grand Haven Harbor ice formed on the 8th, and during the remainder of the month there was more or less ice, varying from day to day as the wind and temperature changed. Shore ice first formed in Alpena Harbor on the 7th and 8th, and the entire bay was covered by the end of the month. The observer at Port Huron states that Black River was frozen over on the 3d, and that at the close of the month the ice was 9 inches in thickness. The first ice in the St. Clair River was observed on the 16th. Floating ice was noted in the Detroit River after the 1st, and in quiet slips south of the city the ice was 10 inches thick on the 19th. Ice began to form on the Maumee River and Maumee Bay on the 6th, and by the 26th the thickness ranged from 5 to 12 inches. Ice formed on Sandusky Bay on the 2d, and the

entire bay was frozen over by the 5th. The first ice of the season was noted in Cleveland Harbor on the 10th, 2 to 3 weeks earlier than usual, and at Buffalo, and along the Niagara frontier, ice formed exceptionally early. The Genesee River froze over early in the month, and the ice was 8 inches thick on the 31st, while on the same date the ice on Cazenovia Lake and Oneida Lake was respectively 8 and 12 inches in thickness. The Grass River in northern New York was completely frozen over on the 3d, and the ice in Mallets Bay, Lake Champlain, was 12 inches thick on the 28th.

NAVIGATION ON THE GREAT LAKES.

The display of storm warnings on the Great Lakes terminated for the season on December 6, and after that date navigation was practically suspended, except between a few points on Lake Michigan. The season of 1910 was especially favorable for navigation, not a single exceptionally severe storm having occurred, and the list of casualties because of stress of weather was consequently much smaller than usual. The number of storm warnings displayed on the Great Lakes was probably smaller than during any previous season in the history of the Weather Bureau.

THE GENERAL WEATHER CONDITIONS FOR THE DISTRICT THROUGHOUT THE YEAR 1910.

Moderately cold weather prevailed in January and February, and the snow continued so persistently on the ground that sleighing was continuous during these months from early in the previous December. More than the usual amount of precipitation, chiefly in the form of snow, occurred in January, and the snow and sleet storm of January 12–14 caused great injury to electric wires and to transportation interests. The snowfall, however, in February was deficient, except in the eastern portion of the district. Warm weather set in early in March and continued until about the middle of April, the warmth of the month of March breaking all previous records. It turned cold, however, about the middle of April and the temperature remained unseasonably low until early in June, the frosts during this period causing great damage to fruit buds and tender vegetation. During the summer months the temperature was somewhat above the normal, while the month of October was warmer than usual in the greater portion of the district, and this was followed by exceptionally cold weather in November and December. The year as a whole was warmer than usual, except in portions of Ohio, New York State, and Vermont, an average excess of 2.3 degrees being noted at Houghton, Mich. Drought conditions prevailed in portions of the district, especially in the Upper Lake region, during most of the year, and the only places where an annual excess was noted were in New York State in the vicinity of Lakes Erie and Ontario.

In the appended table will be found the departures of temperature and precipitation from the normal for the year 1910 for the regular Weather Bureau stations in the district.

Station.	Temperature.	Precipitation.	Station.	Temperature.	Precipitation.
	°F.	Inches.		°F.	Inches.
Duluth, Minn.	+ 1.2	− 11.29	Toledo, Ohio	+ 0.8	− 1.80
Green Bay, Wis.	+ 2.2	− 1.98	Sandusky, Ohio	− 0.1	− 1.54
Milwaukee, Wis.	+ 1.8	− 10.30	Cleveland, Ohio	− 0.1	− 1.20
Chicago, Ill.	+ 2.1	− 6.42	Erie, Pa.	0.0	− 2.39
Houghton, Mich.	+ 2.3	− 7.37	Buffalo, N. Y.	+ 0.1	+ 5.26
Marquette, Mich.	+ 1.3	− 2.09	Rochester, N. Y.	+ 0.4	+ 1.63
Sault Ste. Marie, Mich.	+ 0.3	− 5.87	Oswego, N. Y.	− 0.1	+ 0.93
Escanaba, Mich.	+ 1.5	− 4.08	Syracuse, N. Y.	− 0.1	− 3.57
Grand Haven, Mich.	+ 0.5	− 8.12	Ithaca, N. Y.	+ 0.2	− 1.83
Grand Rapids, Mich.	+ 0.5	− 7.97	Canton, N. Y.	− 0.5	− 4.88
Alpena, Mich.	+ 1.9	− 8.61	Burlington, Vt.	− 1.5	− 1.12
Port Huron, Mich.	+ 0.3	− 3.87	Northfield, Vt.	+ 0.3	− 1.19
Detroit, Mich.	+ 0.3	− 7.17			

TABLE 1.—*Climatological data for December, 1910, District No. 4, Lake Region.*

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 direction of wind.	Observers.
Minnesota.																				
Duluth	St. Louis	1,133	39	12.8	−4.7	36	14	−20	30	35	0.56	−0.66	0.18	7.3	10	7	15	9	nw.	U. S. Weather Bureau.
Floodwood	do	1,257	6					−28[g]	30		0.82		0.50	8.5	3	15[g]	1[g]	8[g]		M. H. Schussler.
Stephens Mine	do	1,500	3	10.2		36	31	−37	30	42	0.45		0.20	7.5	6	7	9	15	nw.	Oliver Iron Mining Co.
Two Harbors	Lake	614	16	16.8	−1.8	39	14†	−26	30	40	0.56	−0.36	0.21	12.0	4	9	15	7	nw.	G. W. Watts.
Virginia	St. Louis	1,434	16	9.7	−1.2	33	13†	−33	30	38	0.61	−0.62	0.26	7.0	4	12	3	16	nw.	Oliver Iron Mining Co.
Wisconsin.																				
Appleton	Outagamie	795	11	19.4	−2.1	36	14	− 1	8†	26	0.81	−1.01	0.38	15.2	8	13	10	8	w.	Wm. O. Thiede.
Ashland	Ashland	647	16	18.2	−2.2	38	14	−10	30	34	0.82	−0.39	0.27	12.0	6	11	7	13	w.	Sam Wheeler.
Bayfield	Bayfield	635	2	17.0[h]		41	18	− 5	21	35[h]	2.40		0.80	24.0	5	10[h]	0[h]	13[h]	nw.	Wm. Miller.
Cecil	Shawano	804	3	18.4		38	14†	− 8	9	37	0.60		0.23	10.5	6	9	16	6	sw.	Louis W. Schmidt.
Florence	Florence	1,293	19	15.8	−2.4	36	14	−12	25	35	0.54	−1.00	0.50	5.4	2	8	5	18	nw.	Fred S. Evans.
Fond du Lac	Fond du Lac	800	24	19.0	−2.8	40	15	− 7	13	32	0.74	−0.74	0.30	10.0	8	11	3	17	nw.	Geo. W. Marshall.
Grand River Locks	Marquette	770	14	20.2		40	14	−11	9	29	0.36	−0.98	0.12	10.2	6	12	6	13	nw.	Jerry Parkinson
Green Bay	Brown	617	24	19.2	−2.1	36	14	− 1	9	25	0.75	−1.06	0.41	8.6	9	5	10	16	nw.	U. S. Weather Bureau.
Iron River	Bayfield	1,096	1	16.2		34	14†	−10	30	29	0.40		0.20	5.0	2	22	3	6	nw.	Harry C. Hall.
Kewaunee	Kewaunee	590	1	21.4		37	17	0	8†	26	1.66		0.62	16.6	7	12	8	11	nw.	Eugene V. Kimball.
Manitowoc	Manitowoc	616	59	22.1	−2.8	38	14	0	9	29	0.87	−0.95	0.35	10.5	7	10	9	12	w.	Johanna Lüps.
Menasha	Winnebago	764	13								1.16	+0.08	0.32	8.8	7	14	4	13	nw.	Geo. T. Allanson.
Menomonee Falls	Waukesha	842	1	21.0		38	28	− 1	21	27	1.13		0.30	7.0	9	12	6	13	nw.	Arthur H. Christman.
Milwaukee	Milwaukee	681	40	23.8	−2.2	41	14	7	9	27	0.46	−1.46	0.15	4.6	10	10	5	16	nw.	U. S. Weather Bureau.
New London	Outagamie	762	14	18.2	−1.6	37	14	− 8	9	30	0.82	−0.60	0.25	15.0	6	10	4	17	nw.	Aug. H. Pape.
Oconto	Oconto	590	19	19.2	−3.4	41	18	− 4	25	31	1.60	−0.20	0.45	16.0	7	6	18	7	w.	Wm. K. Smith
Oshkosh	Winnebago	744	21	18.5	−4.4	38	13	− 6	8	28	0.72	−0.67	0.28	11.0	4	21	6	4	sw.	Evan Vincent.
Pine River	Waushara	900	15	18.0	−2.7	36	27†	−10	9	31	0.63	−0.77	0.20	9.4	8	6	14	11	nw.	George H. Carpenter.
Plum Island	Door	588	2	24.8		43[h]	18	6	30	24	1.03		0.30	10.3	5	4	11	16	nw.	Geo. C. Robinson.
Plymouth	Sheboygan	843	1	19.9		40	27	0	9	28	0.36		0.16	5.9	4	10	8	13	n.	Paul O. Feldrappe.
Port Washington	Ozaukee	713	17	22.9	−0.8	38	27	2	9	22	1.15	−0.61	0.30	11.5	7	11	5	15	nw.	Richard C. Kann.
Racine	Racine	633	13	23.5	−1.9	41	27	2	9†	25	0.26	−1.21	0.08		4	14	2	15	nw.	Daniel Davis.
Ripon	Fond du Lac	935	1	19.1		38	14	− 2	31	36	1.10		0.37	11.0	5	15	6	10	nw.	Ripon College.
Sheboygan	Sheboygan	831	12	23.0	−2.6	38	14†	2	9	24	1.10	−0.67	0.30	11.0	7	18	3	10	nw.	Louis C. Meyer.
Sturgeon Bay	Door	600	12	21.6	−2.8	41	17	− 1	16	29	0.57		0.16	14.0	8	6	12	13	n.	Adam N. Dier.
Superior	Douglas	671	1	13.6		36	14	−13	30	43	0.52		0.16	5.2	9	10	9	12	sw.	Edward B. Banks.
Waupaca	Waupaca	857	14	17.2	−2.3	40	14	−13	9	38	0.80	−0.48	0.36	15.2	7	11	10	10	sw.	James H. Flagg.
Illinois.																				
Chicago	Cook	824	40	26.4	−2.9	43	27	7	12	20	1.32	−0.75	0.71	9.2	11	8	8	15	w.	U. S. Weather Bureau.
Indiana.																				
Auburn	De Kalb	874	14	19.8	−6.2	36	27	− 2	9†	33	2.15	+0.02	0.45		10	4	0	27	w.	Mrs. Josie B. Kuhlman.
Berne	Adams		0	25.1[d]		45[g]	28†	1	25	30[g]	2.11		1.03	12.1	10	9	10	12	sw.	H. M. Reusser.
Elkhart	Elkhart	801	8	25.0		41	28	7	9	24	2.25		0.72		9	6	15	10	sw.	Dr. Miles Medical Co.
Fort Wayne	Allen	775	14	25.1	−2.2	48	23	2	9	32	1.78	−0.67	0.89	6.7	9	6	6	19	nw.	Orion E. Mohler.
Hammond	Lake	598	19	25.5	−1.4	41	27	2	11	27	1.51	−0.69	0.86	6.0	5	5	4	22		Carson W. Whitney.
Howe	Lagrange	886	5	23.2[h]		40[h]	27	1[i]	13	32	1.05[i]		0.40[i]	8.0[i]	5[i]	11[i]	0[i]	11[i]	w.	James E. Zook.
South Bend	St. Joseph	726	17	23.1	−4.1	38	31†	1	13	31	2.59	−0.39	0.75	22.5	13	4	2	25	s.	Henry H. Swaim.
Whiting	Lake	606	0	26.0		42	15	2	12	24	1.27		0.62	6.5	4	16	2	13	sw.	D. H. Boyd.
Michigan—Upper Peninsula.																				
Baraga	Baraga	623	8	23.0		45	1	11	8	32	1.50		0.60	15.0	7	5	2	22	w.	D., S. S. & A. Ry.
Bergland	Ontonagon	1,300		15.5		40[a]	15	− 6	25	30[a]	1.27		0.50	21.0	9	4	6	21	sw.	Frank McMonigal.
Blaney	Schoolcraft		3	20.7		36	17	− 2	30	25	1.90		0.80	19.0	12	12	9	10	nw.	Dr. S. S. Hackwell.
Calumet	Houghton	1,246	22	18.0	−3.2	35	14	− 6	30	31	2.64	−0.24	0.44	33.0	19	3	4	24	n.	E. S. Grierson.
Chatham	Alger	875	9	19.6		37	17	− 4	9	36	2.25		0.23	22.5	26	5	6	20	nw.	U. P. Experiment Station.
Deer Park	Luce	610	9																	Mrs. Sara E. McGaw.
Detour	Chippewa	585	9	21.2		46	18†	−15	31	50	1.48		0.60	18.5	5	17	0	14	n.	Dr. F. E. Cameron.
Eagle Harbor	Keweenaw	622	11	22.6	−0.8	38	14†	− 1	30	31	0.88	−2.16	0.20	8.8	11	3	4	24	nw.	John Nolen.
Escanaba	Delta	612	37	20.8	−0.8	36	14	− 3	30	29	1.34	−0.36	0.52	13.5	13	5	6	20	nw.	U. S. Weather Bureau.
Ewen	Ontonagon	1,147	9	15.7		33	22†	−20	25	44	3.55		0.60	35.5	17	11	0	20	w.	W. B. Hatfield.
Grand Marais	Alger	610	9																	Mrs. Lena Truedell.
Houghton	Houghton	668	9	20.0	−1.5	36	14	− 9	25	31	1.94	−0.53	0.32	23.8	20	2	6	23	nw.	U. S. Weather Bureau.
Humboldt	Marquette	1,536	13	15.6	+0.5	37	15	−29	25	50	1.00	0.00	0.60	10.0	4	2	7	22	w.	D., S. S. & A. Ry.
Iron Mountain	Dickinson	1,111	9	18.8		45	15	−10	25†	37[b]	0.52		0.36	5.0	6	0	6	25	nw.	Chapin Mining Co.
Iron River	Iron	1,504	13	13.2	−2.5	36	4	−17	25	37	2.20	−0.99	0.70	20.0	11	6	21	4	nw.	Victor D. Laing.
Ironwood	Gogebic	1,520	7	15.8		36	14	− 5	30	30	1.01		0.30	22.0	8	8	3	20	w.	Prof. J. V. Brennan.
Ishpeming	Marquette	1,536	10	16.0[f]	−1.1	35[f]	14	− 9[f]	27	38[f]	0.88	−1.12	0.30	8.8	16	4	11	16	w.	Cliv'd Cliffs Iron Co.
Isle Royale	Keweenaw	610	3																	John H. Malone.
Mackinac Island	Mackinac	831	10	17.8	−5.6	31	1	− 4	29	28	0.52	−1.03	0.26	5.2	4	4	9	18	n.	M. I. S. P. Com.
Maple Ridge	Delta		4	18.0		34	17	− 8	30	29	1.20		0.60	12.0	3	9	3	19	nw.	Hermon Johnson.
Marquette	Marquette	734	39	21.0	−1.9	35	27	0	30	23	3.67	+1.15	0.76	43.0	25	1	11	19	sw.	U. S. Weather Bureau.
Menominee	Menominee	581	11	20.7[b]	−2.5	39	14	− 1	30	26[b]	1.25	+0.44	0.40	12.5	9	12	7	12	nw.	C. & N. W. Ry.
Newberry	Luce	773	8													2[m]	5[m]	11[m]		John Brown.
Powers	Menominee	868	11																	C. & N. W. Ry.
St. Ignace	Mackinac	593	20	21.6	−2.7	38	14	− 1	25	33	1.19	−0.85	0.30	8.9	5	8	13	10	w.	D., S. S. & A. Ry.
Sault Ste. Marie	Chippewa	614	22	15.5	−5.0	36	14	−13	30	37	1.33	−1.00	0.44	14.6	15	3	4	24	e.	U. S. Weather Bureau.
Thomaston	Gogebic	1,347	13	15.2	+0.8	36	14	− 8	5	32	2.84	+0.57	0.50	28.0	14	3	6	22	nw.	D., S. S. & A. Ry.
Victoria	Ontonagon	1,263		14.1		37	14	−11	30	38	2.48		0.30	37.5	20	6	6	19	nw.	R. S. Schultz, jr.
Watersmeet	Gogebic		1	14.8		34	14	−18	25	35	0.92		0.20	9.2	15	7	2	22	nw.	B. N. Grant.
Wetmore	Alger	878	13	19.6	+0.5	38	17	−16	31	48	2.03	−0.32	0.50	26.0	9	8	0	23	sw.	D., S. S. & A. Ry.
Whitefish Point	Chippewa	610	20	21.6	−0.5	37	14	− 4	30	32	4.00	+1.95	0.73	41.8	17	0	0	31	se.	Robert Carlson.
Michigan—Lower Peninsula.																				
Adrian	Lenawee	770	32	23.3	−4.8	41	18	− 4	25	31	1.30	−1.28	0.40	13.0	8	0	8	23	nw.	B. F. Gibbs.
Allegan	Allegan	698	19	25.9	−2.4	42	27	8	22	28	1.80	−0.64	0.40	27.0	11	3	12	16	s.	Pere Marquette R. R.
Alma	Gratiot	750	23	22.0	−4.3	39	26	− 2	9	28	1.87	−0.42	0.43	18.5	12	8	9	14	nw.	P. M. Smith.
Alpena	Alpena	609	37	21.6	−3.2	37	14	− 2	30	27	1.29	−0.93	0.38	16.0	16	1	11	19	nw.	U. S. Weather Bureau.
Ann Arbor	Washtenaw	930	30	21.4	−5.3	38	14†	− 2	25	28	2.27	−0.02	0.62	22.7	13	9	7	15	w.	University of Michigan.
Arbela	Tuscola	728	14	20.4	−5.5	37	27	− 8	25†	41	1.96	−0.36	0.35	16.0	10	0	6	25	sw.	Wm. Atkin.
Battle Creek	Calhoun	822	26	22.2	−5.4	37	27	− 3	25	26	2.14	−0.20	0.74	21.0	12	6	8	17	nw.	Elmer Sager.
Bay City	Bay	593	14																	Pere Marquette R. R.
Benzonia	Benzie	832	14																	Martin S. Joiner.
Berlin	St. Clair		21	20.6[c]	−5.9	38[c]	14	− 3[c]	30	32[c]	2.12	−0.22	0.52	19.4	12	2	10	19	nw.	R. O. Gould.
Big Rapids	Mecosta	906	14	21.0	−2.8	38	27	− 5	25	27	1.30	−0.96	0.50	13.0	5	7	6	18	w.	Charles Gay.
Bloomingdale	Van Buren		6	23.6		38	15	5	13	25	2.35		0.80	23.5	13	8	1	22	sw.	John M. Haven.
Cadillac	Wexford	1,293	1	20.5		35	14†	1	31	34	1.26		0.36	18.0	9	7	9	15	w.	A. J. Teed.
Cassopolis	Cass	903	9	24.9		38	27	2	22	27	2.15		0.40	24.0	11	3	0	28	nw.	Michigan Central R. R.
Charlevoix	Charlevoix	610	32	23.0	−5.3	37	31	5	31	32	1.60	−0.78	0.60	16.0	4	0	8	23	nw.	Pere Marquette R. R.
Charlotte	Eaton		6	21.0		40	14	− 5	9†	32	1.42		0.60	22.5	10	3	9	18	sw.	City of Charlotte.
Cheboygan	Cheboygan	611	20	19.2[a]	−4.7	40[a]	15	− 6[a]	31	41[a]	0.90	−0.94	0.25	14.0	6	2	19	10	nw.	E. A. Bouchard.
Clinton	Lenawee	830	20	25.2	−2.6	38	18	− 5	9†	30	1.64	−0.58	0.35	14.9	8	8	10	23	sw.	David Woodward.
Coldwater	Branch	984	13	25.9	−0.8	38	27	− 4	25	26	1.51	−1.10	0.60	13.9	10	7	2	22	sw.	Lake Shore & Mich. So. Ry.

TABLE 1.—*Climatological data for December, 1910. District No. 4, Lake Region*—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 direction of wind.	Observers.
***Michigan—Lower Peninsula*—Continued.**																				
Concord	Jackson		5	22.2		39	27†	0	16	28	2.25		0.94		6	14	14	3	sw.	Dr. W. N. Armstrong.
Croton	Newaygo	685	2	25.7[b]		41[d]	20	5	16	30[d]	1.13		0.30	10.5	9	2	13	16	sw.	G. R. Mus. Power Co.
Detroit	Wayne	730	39	23.2	−6.3	38	18	7	16	25	2.05	−0.34	0.45	20.1	17	3	12	16	nw.	U. S. Weather Bureau.
Durand	Shiawassee	799	3																	H. J. Tobin.
East Tawas	Iosco	590	13	22.2	−2.5	40	14†	−1	31	31	0.86	−0.60	0.24	16.0	7	17	10	4	sw.	Detroit & Mackinac Ry.
Eloise	Wayne	640	13	22.6	−3.9	40	18	0	9†	31	2.20	−0.39	0.52	17.1	13	8	6	27	w.	John Gilmore.
Flint	Genesee	730	21	21.2	−5.4	87	27	−9	31	42	1.15	−0.64	0.40	11.5	9	2	11	18	w.	Wm. L. Fisher.
Frankfort	Benzie	589	6	26.2		38	31	10	31	28	1.95		0.20	19.5	17	0	0	31	w.	Capt. Geo. Morency.
Ganges	Allegan	665	1	25.2		39	27	10	22	23	1.44		0.40	16.0	6	5	5	21	sw.	H. H. Hutchins.
Gaylord	Otsego	1,367	5	18.0		34	4	−2	9	17						16	0	15	nw.	Michigan Central R. R.
Gladwin	Gladwin	794	14	20.4	−4.6	40	14	−9	9	33	0.45	−1.07	0.20	7.0	3	20	9	2	sw.	Geo. R. Smith.
Grand Haven	Ottawa	628	29	25.9	−4.2	40	14	12	22	22	1.62	−0.89	0.32	21.1	20	4	5	22	se.	U. S. Weather Bureau.
Grand Rapids	Kent	707	21	25.1	−3.7	38	27	14	9	21	1.37	−1.17	0.51	18.4	12	3	7	21	s.	Do.
Grape	Monroe	625	20					0	16		1.06	−0.92	0.32	15.4	13	6	11	14	sw.	Joseph W. Morris.
Grass Lake	Jackson	889	4	20.2		36	14†	−6	25	28	2.06		0.55	16.0	8	9	1	21	sw.	Menzo Conklin.
Grayling	Crawford	1,147	21	16.4	−6.5	36	16	−12	25	37	1.50	−0.76	0.40	15.0	8	13	16	2	nw.	S. N. Insley.
Harbor Beach	Huron	635	22	23.1	−4.1	38	14	−6	31	36	1.86	+0.14		28.0	15	0	1	30	nw.	Pere Marquette R. R.
Harrison	Clare	1,150	17																	Do.
Harrisville	Alcona	616	26	20.4	−4.1	39	14	−8	31	41	2.24	−0.41	0.40	22.5	14	1	11	19	sw.	Dr. D. W. Mitchell.
Hart	Oceana	698	18																	Pere Marquette R. R
Hayes	Huron	620	20																	Theo. Leipprandt.
Highland	Oakland	830	18								3.31	+0.78	0.85	24.5	10					A. D. De Garmo.
Hillsdale	Hillsdale	1,150	13	22.8	−2.5	45	29	0	9	38	1.64	−0.92	0.60	13.5	15	7	5	19	sw.	Prof. C. L. Herron.
Holland	Ottawa	610	4	24.2		42	27	0	13	32	1.57		0.25	15.5	14	2	11	18	sw.	City of Holland.
Howell	Livingston	924	18	19.2	−7.4	37[d]	18†	−1[d]	16	28[d]	1.48	−0.25	1.00	9.4	8	5[a]	16[a]	9[a]	sw.	Frank Sharp.
Ivan	Kalkaska		21	19.4	−4.5	36	14	−7	9†	32	1.25	−1.09	0.26	20.0	11	2	16	13	sw.	O. L. Giddings.
Jackson	Jackson	927	13	22.6	−3.9	40	27	1	9†	29	1.49	−0.53	0.65	10.0	11	7	9	15	sw.	City of Jackson.
Jeddo	St. Clair	667	21	21.3	−5.5	36	27	−6	31	35	2.80	+0.62	0.60	28.0	14	7	8	16	nw.	William Bice.
Kalamazoo	Kalamazoo	955	34	24.8	−3.0	42	9	5	24	30	2.59	−0.20	0.43	39.5	15	5	9	17	w.	Kalamazoo Asylum.
Lansing (Agr. College)	Ingham	820	46	21.6	−4.5	38	27	−2	16	30	1.28	−0.71	0.36	19.8	14	4	7	20	sw.	U. S. Weather Bureau.
Lansing (Capitol)	....do	881	23																	State Board of Health.
Lapeer	Lapeer	827	11	22.1	−3.4	39	27	−1	31	35	1.45	+0.09	0.50	15.5	7	2	5	25	sw.	Michigan Home.
Ludington	Mason	586	12	26.0[d]	−0.9	38	14†	9	15	27[d]	0.54	−1.61	0.24	12.0	6	1[d]	18[d]	8[d]	w.	Pere Marquette R. R.
Luther	Lake	1,028	0	21.4		38	31	−3	25	36	0.88		0.19	15.2	15	4	5	22	w.	John W. Nichoson.
Mackinaw	Cheboygan	592	14	20.2	−3.3	40	18	−1	31	35	1.78	−0.18	0.48	22.0	8	3	4	24	nw.	Grand Rapids & Ind. R. R.
Mancelona	Antrim	1,121	14	19.2	−3.2	33	14	−1	6	30	2.60	−0.09	0.60	26.0	8	0	11	20	w.	Do.
Manistee	Manistee	600	13	24.8	−2.8	39	14	8	31	30	0.80	−1.63	0.40	8.0	3	0	5	26	nw.	Pere Marquette R. R.
Midland	Midland	604	11	22.7	−3.5	42	1	4	25	28	1.95	+0.59	0.50	19.5	7	2	0	29	nw.	Do.
Montague	Muskegon	660	7																	Gerard A. Whitback.
Morenci	Lenawee	811	3	23.0		39	18	−1	13	28	1.34		0.65	11.0	8	7	9	15	nw.	George J. Tripp.
Mount Clemens	Macomb	615	10			45	30				2.89	+0.98	0.60		12	4	5	22	w.	Water Works.
Mount Pleasant	Isabella	826	11	20.9[e]	−3.9	39	27	2[f]	10	35[f]	0.75	−0.85	0.30	7.5	5	22[a]	0[a]	8[a]	sw.	Pere Marquette R. R.
Muskegon	Muskegon	587	14	25.4		38	18	9	22	24	2.10		0.60	21.0	10	6	4	21	n.	Grand Rapids & Ind. R. R.
Old Mission	Grand Traverse	858	16	23.0	−3.6	37	17	7	30†	29	1.28	−0.43	0.17	10.1	15	0	11	20	sw.	E. O. Ladd.
Olivet	Eaton	934	20	21.8	−5.1	36	27	3	25	25	1.85	−0.70	0.70	18.2	12	12	1	18	nw.	Prof. G. A. Knapp.
Omer	Arenac	616	11	21.2[e]	−2.4	38[f]	18†	2	16	27[f]	0.75	−0.53	0.30	7.5	5	2	11	18	nw.	Detroit & Mackinac R. R
Onaway	Presque Isle	826	7													0	1	30	n.	Do.
Ovid	Clinton	760	20																	Dr. B. L. Bates.
Owosso	Shiawassee	731	13	23.3[d]	−3.0	42	14†	0	9	34[d]	2.40	+0.93		24.0	13	2[d]	10[d]	15[d]	nw.	Owosso Sugar Co.
Petoskey	Emmet	660	20																	Grand Rapids & Ind. R. R.
Plymouth	Wayne	725	13	22.0	−6.7	44	15	0	9†	35	1.45	−0.35	0.50	14.5	7	21	0	9	nw.	Pere Marquette R. R.
Pontiac	Oakland	935	10	22.3	−7.7	40	27	2	30	28	2.14	−0.35	0.70	17.5	8	10	4	17	nw.	Fred W. Shaw.
Port Austin	Huron	618	14																	Pere Marquette R. R.
Port Huron	St. Clair	639	35	21.7	−5.6	38	14	3	30	28	2.41	+0.24	0.55	28.2	13	5	7	19	sw.	U. S. Weather Bureau.
Reed City	Osceola	1,033	14	22.0	−1.6	36	14†	0	10	30	0.82	−0.64	0.30	7.0	7	0	0	31	nw.	Pere Marquette R. R.
Roscommon	Roscommon	1,141	6	18.1		38	14	−12	25	42						2	16	12	sw.	State Forestry Com.
Saginaw	Saginaw	601	8	23.0	−3.2	40	27	3	31	32	2.15	−0.03	0.35	21.5	13	7	8	16	sw.	Postmaster.
Saginaw, W. S	....do	601	15	22.7[a]	−3.8	40	27	1[c]	25	31[c]	1.42	−0.63	0.31	16.8	14	6	7	18	sw.	Robert B. Hudson.
St. James	Charlevoix	681	4	22.8		36	14†	3	31	33	2.33		0.70	13.0	9	0	0	31	sw.	Rev. N. Wilhelm.
St. Joseph	Berrien	593	23	27.0	−4.2	38	15	5	23	30	2.55	−0.40	0.75	19.0	8	6	5	20	nw.	City of St. Joseph.
Sandusky	Sanilac	790	1	21.4		38	28	2	9†	29	1.09		0.25	17.0	8	4	8	19	w.	Pere Marquette R. R.
Saranac	Ionia	639	15	23.0	−4.5	40	27	3	16	31	1.22	−1.59		14.6	8	8	1	22	sw.	John Wallington.
South Haven	Van Buren	585	14			38	1				2.11	−0.98	0.30	30.5	16	4	14	13	sw.	Mrs. M. E. De Diemar.
Stanton	Montcalm	880	17																	City of Stanton.
Thornville	Lapeer	975	33	23.9	−4.3	45	23	−5	31	42	3.40	+1.04	0.90	29.5	13	1	4	26	w.	Dr. J. S. Caulkins.
Traverse City	Grand Traverse	588	13																	Grand Rapids & Ind. R. R.
Vassar	Tuscola	641	9	21.6		38	27	−7	25	40	1.25		0.30	12.5	9	0	16	15	sw.	Pere Marquette R. R.
Wasepi	St. Joseph	842	13	23.4	−2.5	40	27	−2	13	30	2.96	+0.08	1.05	15.0	10	6	0	25	sw.	Chas. A. Palmer.
Webberville	Ingham	884	8	21.6		39	27	−7	9	28	2.25		0.60	22.5	13	4	8	19	nw.	I. R. Wadsworth.
West Branch	Ogemaw	973	7																	Mich. Cent. R. R.
Woodlawn	Montmorency		8	16.0		34	17	−16	9†	42	2.95		0.45	29.5	12	3	6	22	nw.	T. C. Mathews.
Ypsilanti	Washtenaw	736	25	21.3	−5.8	38	18	−3	25	30	2.13	−0.39	0.50	20.2	11	3	16	12	nw.	Orin J. Bemiss.
Ohio.																				
Akron	Summit	1,081	23	24.6	−6.2	48	29	7	16†	28	1.85	−0.70	0.45	9.5	12	4	4	23	sw.	Prof. C. R. Olin.
Benton Ridge	Hancock	800	17	25.5	−4.3	45	27	2	13	25	2.06	−0.59	0.80	10.8	12	2	4	25	sw.	J. W. Powell.
Bowling Green	Wood	670	30	23.6	−5.0	42	28	3	13	24	1.60	−1.57	0.50	9.6	8	8	10	13	sw.	G. C. Housekeeper.
Bucyrus	Crawford	1,000	15	21.8	−7.5	47	29	0	13	31	1.65	−0.97	0.70	7.0	6	12	7	12	s.	James R. Hopley.
Cleveland (1)	Cuyahoga	762	39	25.6	−5.5	47	28	12	17	24	2.42	−0.16	0.58	17.1	19	1	7	23	sw.	U. S. Weather Bureau.
Cleveland (2)§	....do	754	13	25.9	−3.2	47	28	9	10†	26	2.32	−0.10	0.59	13.0	17	3	1	27	w.	Rev. F. L. Odenbach, S. J.
Conneaut	Ashtabula	675	....	25.6		45	28	7	31	27	3.01		0.35	30.2	16	3	6	22	sw.	E. L. Ransom.
Defiance	Defiance	712	16	23.4	−5.6	38	27†	0	13	32	1.31	−1.39	0.63	4.5	9	7	5	19	sw.	John F. Hielshorn.
Findlay	Hancock	776	21	23.3	−7.4	47	27	2	9†	30	2.08	−0.44	0.90	8.0	5	12	14	5	sw.	Dr. E. A. Moser.
Fremont	Sandusky	628	9	25.6		45	28	6	13†	27	2.13		0.75	10.5	11	10	8	13	sw.	E. Stanley Thomas.
Hedges	Paulding	725	16	23.9	−4.6	40	18†	0	9	26	2.77	−0.07	0.80	18.0	10	12	6	13	sw.	Charles Stutzman.
Hillhouse	Lake	997	18	23.6	−5.3	46	28	−4	31	37	3.34	+0.13	0.50	28.5	15	4	9	18	sw.	J. W. Doncaster.
Hiram	Portage	1,260	26	23.8	−5.4	45	28	6	9	27	2.65	−0.20	0.45	16.5	15	5	2	24	nw.	Prof. G. H. Colton.
Hudson	Summit	1,153	49	22.4	−5.1	40	19†	1	10†	30	1.95	−0.65	0.30	19.0	16	6	4	21	nw.	Dr. W. I. Chamberlain.
Lima	Allen	875	11	24.6[a]	−3.8	39[b]	18	5	9	20[b]	1.50	−1.56	0.40	11.0	5	7	7	17	w.	Miss Ollie De Long.
Medina	Medina	944	22	23.4	−5.5	46	28	−4	16	37	2.43	−0.43	0.58	13.0	9	6	5	20	w.	F. W. Clark.
Montpelier	Williams	880	18	23.3	−4.7	40	27	−1	25	26	1.60	−1.11	0.80	11.0	5	7	2	22	sw.	G. L. Laser.
Napoleon	Henry	680	24	25.0	−4.4	41	18	2	13	28	1.72	−0.72	0.81	3.5	8	10	7	14	w.	A. C. Senter.
New Bremen	Auglaize	1,038	17	24.6	−5.7	48	28	0	25	25	1.77	−0.98	0.60	9.5	9	10	13	8	w.	Miss Lillian Grothause.
North Royalton	Cuyahoga	1,000	18	23.4	−5.8	46	28	4	16	29	3.24	+0.47	0.94	19.0	14	6	8	17	w.	W. S. Edgerton.
Norwalk	Huron	719	24	24.0	−6.3	45	29	0	16†	36	2.47	+0.05	0.63	12.0	12	3	7	21	w.	Dr. Albert Sheldon.
Oberlin	Lorain	855	35	24.4	−6.1	48	28	0	22	33	2.46	+0.28	0.70	11.6	13	10	4	17	w.	Prof. F. F. Jewett.
Ottawa	Putnam	720	18	24.2	−5.3	44	28†	1	13	27	1.87	−0.66	1.20	5.8	6	4	9	18	w.	Prof. J. T. Maidlow.

TABLE 1.—*Climatological data for December, 1910. District No. 4, Lake Region*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing direction of wind.	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 rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio—Continued.																				
Sandusky	Erie	629	33	25.2	−5.9	46	28	9	16	25	1.72	− 0.63	0.66	7.9	15	5	7	19	sw.	U. S. Weather Bureau.
Tiffin	Seneca	775	28	25.4	−5.7	46	28	7	16	22	2.57	− 0.06	0.91	11.8	12	6	8	17	w.	Prof. T. H. Sonnedecker.
Toledo (1)	Lucas	769	39	25.1	−5.4	40	28	11	16	22	1.71	− 0.59	0.62	9.1	12	7	9	15	sw.	U. S. Weather Bureau.
Toledo (2)§	....do	606	6	24.4	.....	41	18	9	16	23	1.67	.....	0.60	6.5	14	6	8	17	n.	J. A. Krance, S. J.
Upper Sandusky	Wyandot	854	27	24.4	−6.7	48	28	5	9	29	2.81	+ 0.16	0.70	10.7	12	4	10	17	sw.	Robert E. Tracht.
Vickery	Sandusky	588	17	23.9	−6.0	46	28	1	13†	30	1.99	− 0.45	0.73	11.0	15	8	4	19	w.	John W. Barr.
Wauseon	Fulton	780	38	22.8	−4.9	40	18	1	25	27	1.80	− 0.85	0.71	12.2	16	4	11	16	sw.	Thomas Mikesell.
Wellington	Lorain	856	16	25.0	−5.6	48	28	0	22	32	2.06	− 0.33	0.54	11.5	14	8	2	21	sw.	W. D. Warren.
Willoughby	Lake	649	16	.....	.....	.....	.....	.....	.....	.....	1.99	− 0.55	0.55	.....	8	2	6	23	w.	C. J. Richardson.
Pennsylvania.																				
Erie	Erie	658	38	26.0	− 5.7	47	28	10	31	24	2.89	− 0.06	0.63	24.0	20	2	6	23	s.	U. S. Weather Bureau.
New York.																				
Adams Center	Jefferson	540	19	18.9	− 4.9	40	23†	−17	31	55	5.90	+ 1.93	1.80	59.0	16	8	7	16	n.	A. E. Cooley.
Angelica	Allegany	1,340	27	19.5	− 6.3	41	28†	−11	31	40	2.09	− 0.57	0.65	25.0	16	1	7	23	w.	Charles P. Arnold.
Appleton	Niagara	270	19	24.2	− 5.5	43	24	− 5	31	32	1.75	− 0.70	0.31	15.0	11	0	7	24	sw.	H. A. Van Wagoner.
Auburn	Cayuga	715	41	21.2	− 7.8	41	28	− 4	31	32	2.12	− 0.64	0.92	22.0	10	15	10	6	s.	A. H. Underwood.
Avon	Livingston	585	15	21.2	− 6.1	40	28	− 4	17†	32	0.83	− 1.02	0.30	11.0	7	1	10	20	.....	W. G. Markham.
Blue Mountain Lake	Hamilton	1,750	10	.....	.....	.....	.....	.....	.....	.....	2.17	− 1.77	0.70	18.0	7	13	8	10	w.	B. F. Merwin.
Brockport	Monroe	537	14	22.0	− 5.2	39	23	− 5	31	27	2.93	− 0.13	0.57	29.5	16	2	10	19	w.	W. H. Lennon.
Buffalo	Erie	767	59	23.4	− 6.7	40	23	3	31	29	2.98	− 0.39	0.59	25.4	23	3	9	19	w.	U. S. Weather Bureau.
Canton	St. Lawrence	448	16	12.2	−10.5	39	23	−30	31	54	3.49	− 0.10	0.81	25.0	19	4	11	16	sw.	Do.
Cape Vincent	Jefferson	246	5	18.2	.....	36	15†	−18	31	39	1.93	.....	0.60	.....	10	10	11	10	e.	Verne M. Rice.
Carvers Falls	Washington	243	12	16.1	− 6.2	42	19	−22	22	39	1.18	− 1.58	0.71	10.0	3	14	10	7	n.	Washburn Fancher, C. E.
Chazy	Clinton	151	10	13.8	− 6.1	38	20	−17	30	33	0.95	− 0.58	0.40	9.5	4	13	4	14	n.	W. R. North.
Dannemora	....do	1,490	5	13.2	.....	37	24	−18	31	38	4.14	.....	0.75	29.2	12	12	2	17	w.	Dr. W. N. Thayer.
Elba	Genesee	500	11	19.6	− 6.4	39	23	−11	31	35	5.20	+ 2.02	0.60	52.0	13	9	9	13	sw.	Jos. S. Wilford.
Fayetteville	Onondaga	530	9	19.9	.....	45	29	−11	31	33	1.64	− 1.09	0.34	15.2	10	8	12	11	nw.	Dana H. Wells.
Gabriels	Franklin	1,729	8	12.4	.....	34	29†	−27	31	42	2.22	.....	0.30	19.7	20	8	6	17	nw.	Sanatorium.
Harkness	Clinton	622	8	15.1	.....	38	19	−17	31	37	1.01	.....	0.23	9.5	8	23	3	5	w.	J. W. Harkness.
Hemlock Lake	Livingston	900	12	21.6	− 6.4	41	28†	− 5	31	31	1.66	− 0.28	.....	15.0	5	5	9	17	nw.	D. H. Westbury.
Hunt	....do	1,321	11	22.4	− 4.3	42	18†	− 9	31	41	2.70	− 0.08	1.10	9.0	5	2	13	16	nw.	W. S. Barrager.
Ithaca	Tompkins	928	32	21.2	− 7.2	44	29	− 1	16	27	2.18	− 0.46	0.78	11.6	17	2	6	23	nw.	U. S. Weather Bureau.
Keene Valley	Essex	1,000	12	15.7	− 4.0	44	27	−17	11	46	2.43	− 0.47	0.94	12.8	13	13	6	12	w.	E. R. Wells.
King Ferry	Cayuga	.....	10	.....	.....	.....	.....	.....	.....	.....	1.41	− 0.99	0.47	11.8	12	4	3	24	nw.	Lucius A. Goodyear.
Lake George	Warren	350	18	19.2	− 5.0	41	24	− 8	17	36	1.54	− 2.12	0.83	5.2	7	8	9	14	n.	Charles Forsell.
Lake Placid Club	Essex	1,864	2	9.8	.....	33	29	−18	10	47	4.44	.....	0.65	36.2	19	7	13	11	nw.	Henry Van Hoevenberg.
Le Roy	Genesee	920	20	20.6	− 7.0	39	27	− 4	31	31	2.67	− 0.34	0.45	23.8	17	2	5	24	nw.	F. W. Ball.
Lockport	Niagara	650	23	22.2	− 7.7	40	23	− 2	31	28	3.01	+ 0.50	0.60	23.5	18	5	1	25	nw.	J. E. Wakeman.
Lowville	Lewis	900	43	13.3	− 9.5	38	29	−21	10	44	2.76	− 0.41	0.85	.....	7	15	6	10	n.	Charles J. Rice.
Maria	Franklin	200	10	12.3	− 6.8	37	24	−22	31	36	4.06	+ 0.93	0.70	33.0	16	5	13	13	w.	C. E. McBride.
Nehasane	Hamilton	1,750	2	10.6	.....	35	30	−28	10	43	5.04	.....	1.02	55.2	21	13	6	12	sw.	Dr. L. W. Brown.
North Lake	Herkimer	1,822	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. A. Paull.
Ogdensburg	St. Lawrence	175	26	15.2	− 6.7	36	19	−14	31	41	2.76	+ 0.32	0.60	22.5	13	6	20	5	sw.	State Hospital.
Old Forge	Herkimer	1,733	2	12.8	.....	42	30	−22	31	48	4.51	.....	1.56	42.8	21	10	6	15	w.	Dr. S. W. Nelson.
Oswego	Oswego	335	40	21.5	− 7.7	40	28	− 6	31	31	2.05	− 1.54	0.41	25.3	18	2	3	26	s.	U. S. Weather Bureau.
Otto	Cattaraugus	1,410	6	20.1[a]	.....	41[a]	24†	− 4[a]	5	34[a]	1.67	.....	0.40	.....	11	15	1	15	.....	William Winke.
Palermo	Oswego	460	51	.....	.....	.....	.....	.....	.....	.....	4.02	+ 0.31	0.80	33.4	19	9	10	12	sw.	E. B. Bartlett.
Perry City	Schuyler	1,038	30	20.4	− 5.2	43	30	−14	17	48	2.76	0.00	1.04	10.9	17	4	2	25	nw.	W. H. Jeffers.
Philadelphia	Jefferson	485	4	14.4	.....	38	24	−24	31	37	2.52	.....	0.47	25.5	14	5	16	10	w.	E. D. Babcock.
Plattsburg	Clinton	170	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. P. Davison.
Potsdam	St. Lawrence	300	34	14.6	− 7.6	41	24	−27	31	55	2.99	+ 1.00	0.56	.....	10	18	0	13	w.	A. E. Sutherland.
Raquette Lake	Hamilton	.....	2	14.4	.....	37	30	−22	10†	38	4.36	.....	0.89	35.0	14	9	4	18	sw.	R. J. Dunning.
Rochester	Monroe	523	81	22.4	− 6.5	39	28	0	31	28	3.15	+ 0.27	0.83	29.8	20	3	5	23	w.	U. S. Weather Bureau.
Romulus	Seneca	719	18	22.7	− 6.3	40	14†	0	31	29	1.80	− 0.42	0.44	15.7	8	3	11	17	s.	John H. Coryell.
Shortsville	Ontario	740	11	20.8	− 6.5	40	29	− 6	6	28	1.50	− 0.46	0.50	14.3	5	4	8	19	sw.	C. H. Latting.
Skaneateles	Onondaga	.....	15	.....	.....	.....	.....	.....	.....	.....	2.39	− 0.82	0.53	.....	20	.....	.....	.....	.....	Edward Conron.
Syracuse	....do	597	8	20.6	− 7.7	42	28	− 4	31	35	2.24	− 0.41	0.50	22.7	17	3	4	24	sw.	U. S. Weather Bureau.
Ticonderoga	Essex	344	12	18.6	− 5.9	40	30	−17	22	40	0.77	− 1.81	0.40	10.5	4	13	6	12	n.	Eva. M. De Lano.
Trudeau	....do	1,620	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Tupper Lake	Franklin	1,522	10	12.4	.....	36	29†	−26	31	45	2.88	+ 0.36	0.70	31.5	13	11	5	15	w.	Rev. Aaron W. Maddox.
Volusia	Chautauqua	1,167	11	21.0	− 5.5	40	28	0	31	29	4.60	+ 1.31	1.00	36.0	14	2	7	22	sw.	Benjamin Breads.
Wanakena	St. Lawrence	.....	0	12.9	.....	38	18	−23	31	42	4.68	.....	1.00	38.5	11	10	3	18	sw.	J. Otto Hamele.
Watertown	Jefferson	737	18	17.0	− 6.6	37	24	−16	31	35	3.53	+ 0.08	0.48	32.5	16	10	8	13	sw.	H. P. Dunlap.
Wedgewood	Schuyler	1,430	21	19.4	− 6.7	41	30	− 4	17	33	1.66	− 1.08	0.40	18.0	11	10	8	13	nw.	Orlando F. Corwin.
Westfield	Chautauqua	837	14	22.8[a]	− 6.0	43[a]	28	2[a]	31	30[a]	3.79	+ 1.04	0.49	17.5	16	.....	.....	.....	.....	John R. Rogers.
Youngstown	Niagara	.....	8	.....	.....	.....	.....	.....	.....	.....	2.09	.....	0.80	17.5	13	1	27	3	n.	B. V. Brookins.
Vermont.																				
Burlington	Chittendon	404	3	15.8	− 6.7	39	19	−13	31	40	2.46	+ 0.77	0.94	18.0	16	1	7	23	s.	U. S. Weather Bureau.
Cornwall	Addison	507	17	16.6	− 8.8	41	30	−11	17	32	2.27	+ 0.01	0.75	21.0	7	8	11	12	n.	C. H. Lane.
Enosburg Falls	Franklin	601	19	12.9	− 9.4	39	19†	−24	31	44	2.70	− 0.27	0.87	21.5	15	9	4	18	nw.	L. Howe Pomeroy.
Northfield	Washington	876	24	12.4	− 8.1	45	30	−19	11	51	1.70	− 1.01	0.75	11.2	13	7	6	18	n.	U. S. Weather Bureau.
Wells	Rutland	750	19	15.6	− 8.2	40	30	−10	16	28	3.33	+ 0.99	1.41	15.5	8	5	14	12	nw.	E. R. Pember.

[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.
§ Dates 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. 4, Lake Region.*

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	
Minnesota.																																	
Duluth	Lakes		.05	.12	.08	.04	.03			.01	.01						.02		T.	T.			T.	T.		.18			.02				0.56
Floodwood	do			.50																						*	.32						0.82
Mount Iron	do																																
Stephens Mine	do			.20	.04	.01					.03															.15	T.		T.	.02			0.45
Two Harbors	do			.21	.10	.09				T.	T.		T.										T.		T.	.16				T.	T.		0.56
Virginia	do		T.	.26		.05					.04								T.				T.			.26	T.						0.61
Wisconsin.																																	
Appleton	Fox		T.	.03	.05	T.	T.	.06			.20								.01				.07	T.	T.	.38	T.			.01			0.81
Ashland	Lake			.14	T.	.07		.06			T.					T.			T.				.15	.13		.27						T.	0.82
Bayfield	do													.60	.40				.80									*	.60				2.40
Cecil	Fox	T.		.03	T.		.08				.18									T.			.05			.23	.03						0.60
Florence	Menominee		T.	T.			T.	T.	T.		T.					T.								.50			.04						0.54
Fon du Lac	Fox			.08	.07	T.	T.	.06			.30								.03				.05		T.	.13				.02			0.74
Grand River Locks	do		T.	.10	.03	T.		T.			.12									T.	T.		.03	T.		.05	T.			.03			0.36
Green Bay	Lake		T.	.07	.02	T.	T.	.02			.09					T.			.01	T.			.09	.01		.41				.03			0.75
Iron River	do			T.																				.20		.20							0.40
Kewaunee	do			.17				.11			.32								.07	T.			.32			.62				.05			1.66
Manitowoc	do	T.			.35		.02				.13	T.							.02				.02			.31				.02			0.87
Menasha	Fox			.05	.14	.05	T.	.16			.21								T.	T.			.23		T.	.32				T.			1.16
Menomonee Falls	Lake		T.	.10	.10	T.		.08			.18								.30	T.			.07	.12		.11			.07	T.			1.13
Milwaukee	do	T.	T.	.03	.08	T.	T.	.01		T.	.15					T.			.01	.01			.04	T.	T.	.09			.02	.02			0.46
New London	Fox			.06	.04			.14			.24								T.	T.			.09			.25							0.82
Oconto	Lake			.20				.05			.45												.20			.50	.10			.10			1.60
Oshkosh	Fox		T.	T.	T.		.10			.14								T.	.20			T.		T.	.28				T.			0.72
Pine River	do	.01	T.	.07	.05	T.	T.	.07			.20						T.			T.			*	.03	T.	*	.17			.03			0.63
Plum Island	Lake										.03					T.							T.	.30	T.	.30	.20	T.	T.	.20			1.03
Plymouth	do		T.		.10			.01			.09	T.				T.			T.	T.			T.		T.	.16	T.			T.			0.36
Port Washington	do				.10			.10			.30									.10			.20			.30				.05			1.15
Racine	do	T.		T.	.08	T.	T.	T.			.08								.05	T.			T.	T.		T.			.05	T.			0.26
Ripon	Fox			.03	.20			.15			.35												T.	T.		.37							1.10
Sheboygan	Lake	T.		T.	.10	T.		.10			.15		T.		T.	T.				T.			.10	T.		.30	.30			.05	T.		1.10
Sturgeon Bay	do		T.	.16	.02			.04			.10	T.	T.			T.			.01				.03	.08		.13	T.			T.			0.57
Superior ‖	do			.16	.04	.03		.04			T.						T.	.01						.01		.14	.06			.03			0.52
Waupaca	Fox	.01		.05				.08			.22									T.			.04			.36				.04			0.80
Illinois.																																	
Chicago	Lake	T.	T.	.08	T.	.01	T.	.01		.05	.23		T.			T.			.08	T.	T.		.03	.01	T.	.03		T.	.71	.08			1.32
Indiana.																																	
Auburn	Maumee	.09	T.		T.			T.			.27	.39	T.							.16	.09			.21			.07		.45	.29	.13		2.15
Berne	do	.02		.10	.02						.14								.03	.01	.03			.37					1.03	.36			2.11
Elkhart	St. Joseph		.09	.08				.05			.29		.15								.49	.33							.72	.05			2.25
Fort Wayne	Maumee	.07	.01	T.	.09			T.			.18		T.			T.	T.		T.	.07	.02			.27		T.			.89	.18			1.78
Hammond	Lake Michigan	T.								.23									.20							.10		.80				.12	1.51
Howe	St. Joseph										.40							.10			.10						.20				.25		1.05
South Bend	do	.75	.04	T.	.05			T.			.22		.13	T.			T.			.08	.25	.38		.04			.08		.51	.04	.02		2.59
Whiting	Lake Michigan			.10								.40	T.						.15						T.				.62				1.27
Michigan—Upper Peninsula.																																	
Baraga	Lake	.60		.10	.10		.20		.20							.10										.20							1.50
Bergland	Ontonagon	.50	T.	.06	T.	.10		T.	.23		.20	.04	T.			.07				.04	T.			.03	T.	T.				T.	T.		1.27
Blaney	Manistique						.10	.10		.05	.05	.10							.05	.05				.20	.20	.80				.10	.10		1.90
Calumet	Lake	.04	.06	T.	T.	.12	.24	.34	.06	.06	.04	.44	.12	T.		.04	T.		T.	.16	T.		T.	.32	.24	.16	.04	.02		.08	.06		2.64
Chatham	do	.06	.07	.12	.04	.07	.06	.03	.07	.08	.13	.16	.04	.05		.08	.02		.08	.17	.23		.18	.07	.04	.12	.06	.03		.16	.03		2.25
Deer Park	do				.10							.60												.08			.60		.10				1.48
Detour	St. Marys																																
Eagle Harbor	Lake	.05	T.	.05		.04	T.	.05	.05	T.	T.	.18	T.		T.	.02			T.		.10		T.	.20	T.	.08	T.	T.		.06	T.		0.88
Escanaba	do	T.	.02	T.	.01	T.	T.	.02		T.	.43	.01	T.		.02	.02			.01	T.	.01	T.	.18	.07	T.	.52	T.			.02		T.	1.34
Ewen	Ontonagon	.30	T.	.05		.10	.10	.30	.10		.20	.40	.40		T.	.20	T.	.10		.60			.10	.30			.10	T.		.10	.10		3.55
Grand Marais	Lake																																
Houghton	do	.03	.02	.01	T.	.03	.02	.16	.10	.07	.29	.16	.05		.01	.04			T.	.31	T.		.05	.25	.05	.20		T.		.07	.02		1.94
Humboldt	Escanaba		.20			.20					T.		T.			T.			T.	T.		T.	T.	T.		.60				T.			1.00
Iron Mountain	Menominee	T.	T.	.03		T.		T.			.08	T.	T.			.02				.02			T.	T.	.01	.36							0.52
Iron River	do	T.	T.	T.	.20	T.	T.	.10			.30					.30	.10			.10	.10	.10	.10	.10		.70	T.			T.			2.20
Ironwood	Lake	.14			.06						.04		.07							.23	.11			.30	.06								1.01
Ishpeming	Escanaba		T.	.02	.01	T.			.01		.02	.01	.01			.10			.02	.10	.05		.01	.05		.30	.10			.02	.05		0.88
Isle Royal	Lake																																
Mackinac Island	do		T.		.08	T.		.04				.14		T.	T.					T.	T.			T.	T.	.26							0.52
Maple Ridge	do										.40													.20		.60							1.20
Marquette	do	.10	.09	.16	.38	.04	.01	.01	.01		.14	.06	.12		.04	.35	.11		.10	.38	.11	T.	.03	.11	.24	.25	.04	T.	T.	.34	.44	.01	3.67
Menominee	Menominee	T.		.20	T.	T.		.10			.15	T.				.10			.05				.10	.05		.40				.10			1.25
Newberry	Tequamenon															.02	.03		.01	.23	.08			.25	.05	T.	.20			.02	.03		
Powers	Lake																																
St. Ignace	do		T.	T.	T.	T.	T.	.23	T.	T.		.30				.30											.27			.09			1.19
Sault Ste. Marie	St. Marys		T.	.01	T.	T.	.05	.11	.02	T.	.03	.21	.02	T.	T.				.06	.07		T.	.08	.18	.02	.10	.34			.03		T.	1.33
Thomaston	Lake	.40			.20		.10	.05	.10	.10	.10	.20	.40							.50			.05	.44	.10					.10			2.84
Victoria	Ontonagon	.12	.01	.03	.01	.15	.24	.27	.25		.10	.20	.15			.04	T.			.17	.01		T.	.30	.06	.24	.02			.02	.09		2.48
Watersmeet	do	.06	.02	.04		T.	.01	.05	T.		.11	T.	.03			.03				.12	.02		T.	.13	T.	.20	.02			T.	.04	.04	0.92
Wetmore	Lake							.15	.50		.20	.08				.18				.28	.28		T.	.18		.18					T.		2.03
Whitefish	do		.12	.01		.40	.20	.21	.10	.15	.19	.45					.10		.20	.35	.30				.15	.04	.73				.30		4.00
Michigan—Lower Peninsula.																																	
Adrian	Raisin			.10				.10				10												.30			.10	.40	.10	.10			1.30
Allegan	Kalamazoo	.10	T.	.07			.07	.28	.13		.20								.07	.40	.07				.07	T.			.34				1.80
Alma	Saginaw	.05		.09	.11	T.		.21	T.		.27	T.							.11	.09			.11		T.	.17	.09		.43	.14	T.		1.87
Alpena	Lake			T.	T.	T.	T.	.04	T.	.02	.31	.07	.04		.20	.16	T.	T.	.06	T.	.04	T.	.01	.01	.02	.20	.01			.08	.02		1.29
Ann Arbor	Huron			.05				.15	.05		.40	.10	T.			T.			.03	.27	.03			.62		.04	.12		.21	.20			2.27
Arbela	Saginaw	T.		T.	T.	T.		.13	T.		.20	.13	T.			.07				.13	T.			.35	T.		.13		.34	.35	.13		1.96
Battle Creek	Kalamazoo	T.	T.	.07	.10			.06	.05		.18	.07							.05	.30			T.	T.	T.	.12	.30		.74	.10			2.14
Bay City	Saginaw																																
Benzonia	Betsie																																
Berlin	Clinton	.03	T.	T.	T.	T.		.05			.18	.30				.07				.17	.02			.43		.13	T.		.52	.14	.08		2.12
Big Rapids	Muskegon			.10				.20	T.		.10	T.								.40		T.		T.	T.	.50							1.30
Bloomingdale	Lake	.05	.10	T.				.30	T.	.10	.10	T.	.10			T.	T.		.05	.20	.30	T.		T.	.20	.05	T.		.80				2.35
Cadillac	Manistee			.05				.09	.05		.09	T.				.07			T.	.30	.20	T.	T.	.05	T.	.36							1.26
Cassopolis	St. Joseph	.10					T.	.20	.20		.30		.10				.10		.10	.20	.40					.30		T.	.25	T.			2.15
Charlevoix	Lake			T.				.40					.60							T.						.30	.30						1.60
Charlotte	Kalamazoo			.03	.02			.01	.07		.20	.03	T.							.20					T.		.13		.60	.13			1.42
Cheboygan	Cheboygan	T.	T.	T.	T.	.10	T.	.10			T.		.20				T.		T.	T.				.20		T.	.25		T.	.05			0.90
Clinton	Raisin			T.	.20				.04		.20	T.								.15	T.			.20			.30		.35	T.	.20		1.64
Coldwater	St. Joseph	.06	.15	.04				.15			.16	T.								.06				.15			.05		.60	.09			1.51
Concord	Kalamazoo			T.	T.			T.	.94		.10	.04								.31				T.	T.	T.			.74	.12			2.25
Croton	Muskegon			.10	T.	T.		.30	.15		.10	T.							T.	.15	T.	T.	T.	.08	T.	.05	.10		.10	T.			1.13
Detroit	Detroit	T.	T.	.07	.01	T.	T.	.16	.06		.34	.05	.02			T.			.14	.05	T.		.03	.41	.04	.05	.05		.45	.11	.01		2.05
Durand	Saginaw																																
East Tawas	Lake					.12		.14			.10		T.	T.					.20				.03	.03		.24							0.86

TABLE 2.—*Daily precipitation for December, 1910. District No. 4, Lake Region*—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.
Michigan—Lower Peninsula—Continued.																																	
Eloise	Rouge	T.		T.	.04			.11	.02		.52	.04	T.			T.			T.	.11	.08			.36	.01		.11		.44	.35	.01		2.20
Flint	Saginaw				T.			.06			.09	.07	.05							.18				.08			.08		.40	.14			1.15
Frankfort	Betsie						.10	.10		.05	.20	.10	.20	.10		.20	.10		.10	.10			.10	.10	.10	.10	.10				.10		1.95
Ganges	Lake		T.	T.	T.			.05			.40	T.	.20			T.	T.		T.	.21	.23				.04	.10			.21				1.44
Gaylord	Cheboygan	.10	.03			.02		.08	T.											.07													
Gladwin	Saginaw										.15									.10							.20						0.45
Grand Haven	Grand	T.	.03	.09	T.	T.	.01	.13	.01	T.	.12	.04	.02			.01	T.		.13	.19	.12	.02	.04	.06	.01	.30	.02		.23	.04	T.		1.62
Grand Rapids	....do	T.	.01	.12		T.	T.	.51	.02		.13	.05	T.			T.	T.		.06	.05	T.	T.	T.	.01	.01	.16	T.		.24	T.	T.		1.37
Grape	Raisin	.08	T.	.02	.07	.02		.06	T.		.09	.10				T.			T.	.05	T.			.10			.02		.32	.10	.03		1.06
Grass Lake	Grand	.20		T.	.20			T.	T.		.20	.15	T.							.20				.46	T.		T.	T.	.55	.10			2.06
Grayling	Au Sable					.20	.40		T.		.10	.30			T.			T.	T.	.20		.10	T.	T.		.10		.10		T.			1.50
Harbor Beach	Lake								.13		.07	.13	.07		.20	.13	.07			.20	.20	.20	.13				.13		.07	.06	.07		1.86
Harrison	Saginaw																																
Harrisville	Lake			T.	.10	.05	.02	.05	.30	.02	.20	.10	T.			.40	T.			.30			.05	.30			.30		T.	.05			2.24
Hart	Pentwater																																
Hayes	Pigeon																																
Highland	Huron	T.	T.	T.	T.	T.	T.	T.	T.		.60	.08		T.	T.	T.			.14	.12	T.	T.	T.	.70		.08	.44	T.	.85	.10	.20	T.	3.31
Hillsdale	St. Joseph			.05				.04	.03		.10	.03	.02				T.		.05	.05			T.	.30	.05	.10	.05		.60	.15	.02		1.64
Holland	Lake	.05	T.	.05				.20	T.	T.	.15	.10	T.						.10	.15	.25	.10		.02	.05	.10	T.		.20	.05			1.57
Howell	Saginaw							.01			.05	.05				T.			.02	.05				.25			.05		1.00				1.48
Ivan	Manistee			.06	T.			.10	.12		.10	.05				.20			T.	.21	.10			.01	.04					T.	.26		1.25
Jackson	Grand	.03		.02	.03			.01	.01		.13	.04	T.							.65	T.			.08			.01		.48	T.			1.49
Jeddo	St. Clair	.20						.10			.12	.08	.10		.05	.15		.05		.30	.30			.50			.20		.60	.05			2.80
Kalamazoo	Kalamazoo	.20	.07	.15				.17	.07		.25		.03						.07	.40		.03	.07			.43	.15		.43	.07			2.59
Lansing (Agr'l College)	Grand			.04				.10	.01		.17	.06							.07	.05	.02		.04	.05	.01	.15			.36	.15			1.28
Lansing (Capitol)	....do																																
Lapeer	Saginaw	.10		T.				.10			.20	.05								.20				.30			T.		.50	T.	T.		1.45
Ludington	Pere Marquette							.08			T.		.07							.07	.06		.02		T.		.24						0.54
Luther	Manistee	.01		.03				.19	.08		.06	.03	.03			T.			.02	.07	T.	.03		.05	T.	.08	.14			.04	.02		0.88
Mackinaw	Lake				.25		.17	.32	.08	.08	T.			T.	T.		T.	T.		.32				T.	T.	.08	.48						1.78
Mancelona	....do			T.	T.			.60	.40		T.	.60	T.			T.			.10	.40	.20	T.	T.	T.	.20	.10				T.		T.	2.60
Manistee	Manistee							.40				T.	.20			T.										.20				T.	T.		0.80
Midland	Saginaw				T.	T.	T.	.20			.30	.20								.25							.50		.30	.20			1.95
Montague	White																																
Morenci	Maumee			.05				.01			.15									.06				.30			.03		.65	.09	T.		1.34
Mount Clemens	Clinton	T.	T.	.08	.04			.10	.04		.50	.04	.02			T.	.60		T.	T.	T.			.49	T.	T.	.48		.45	.05	T.		2.89
Mount Pleasant	Saginaw										.20	.10	.05							.10									.30				0.75
Muskegon	Muskegon	.10		.10	.10			.40	T.	T.		.10	T.			T.			T.	.30	.60	.10			T.	.10	.20		T.				2.10
Old Mission	Lake	.06						.15	.06	.05	.03	.10				.05			.04	.15	.15	.05		.07	.06	.17				.09			1.28
Olivet	Kalmazoo	T.		.11	.01			.20	T.		.23	.02	T.						.07	.13			.08	.06	.08				.70	.16			1.85
Omer	Lake	T.			T.						.10									.20			.30		.05	.10							0.75
Onaway	Cheboygan																																
Ovid	Grand																																
Owosso	Saginaw	.10		.10	.10			.20			.30	.20	.10			T.				.20	.10			.20		T.	.20		.30	.30			2.40
Petoskey	Lake				T.	T.		.40	.30	.20																							
Plymouth	Rouge			T.	T.			.05			.30	T.						.05	.05	.10				.35					.50	.05			1.45
Pontiac	Clinton	T.		T.	T.			.10			.60	.03	T.			T.			T.	.10	T.			.50	T.		.06		.70	.05			2.14
Port Austin	Lake																																
Port Huron	St. Clair	.44		T.	.02			.05	T.		.12	.06	.13	.01		.17	T.	T.	T.	.12	T.			.55	T.	T.	.18		.45	.11	T.		2.41
Reed City	Muskegon			T.	T.			.30	.20		T.				.10					.10	.10					T.			.01			.01	0.82
Roscommon	Au Sable																																
Saginaw	Saginaw	T.	T.	.10	.05	.05	T.	.10	T.	T.	.20	.10	.10			.15			T.	.25	T.			.15	T.	T.	.30		.35	.35	T.		2.15
Saginaw West Side	....do	T.		.03	.03	T.	T.	.05	T.		.12	.05	.05			.10		T.	.06	.09	T.			.13	T.	.08	.21		.31	.11	T.		1.42
St. James	Lake	T.					.08	.17	.70		.02	.50					.16							.18			.40			.12			2.33
St. Joseph	St. Joseph			.20				T.	T.		.40								.30	.30	.20		T.		.20	.20	T.		.75				2.55
Sandusky	Lake							T.			.07	.07				.20			T.	.13				.25					.22	.08	.07		1.09
Saranac	Grand			.02				.20			.12									.20				.05		.03	.30		.30				1.22
South Haven	Lake		.10	.13	.20			.07	.07	.07	.07	.07	.07				.13		.13	.28	.28				.07	.07			.30				2.11
Stanton	Grand																																
Thornville	Saginaw				.05			.20			.30	.20	.10			.10				.20	.10			.60			.38		.90	.12	.15		3.40
Traverse City	Lake																																
Vassar	Saginaw			T.				.10			.10	.05	.10							.15				.15			.20		.30	.10			1.25
Wasepi	St. Joseph	.15		.17				.06			.32								.03	.18				1.05		.15			.80	.05			2.96
Webberville	Grand	.15		T.	T.			.10	.05		.15	.10	T.						.10	.15	.20			.10	.05	T.	.20		.60	.30			2.25
West Branch	Lake																																
Woodlawn	Au Sable			T.	T.			.30	.40		.10	.30	.20			.3	T.	.05	.	.45	.20				.20		.35			.10			2.95
Ypsilanti	Lake			.05	.15			.10	.02		.35	.10								.40				.20			.10		.50	.16			2.13
Ohio.																																	
Akron‖	Lake	.10	.10	T.	.02				.05	T.	T.	.11	T.	.03			.03			T.	.04	T.			.35	T.			.45	.14	.43	T.	1.85
Benton Ridge	Maumee	.05	T.	.05	.15			.03			.10	.05				T.				.05	.05		.30					.80	.20	.23			2.06
Bowling Green	Lake	.05		.10	.10			.10	T.		.20	T.												.35					.50	.20			1.60
Bucyrus	Sandusky	.30			.10						T.	T.	T.						T.	T.	T.				.10				.70	.25	.20		1.65
Cleveland (1)	Lake	.08	.03	.07	.03	T.	T.	.11	.08	T.	.12	.11	.04	T.		.03	T.		.11	.16	.08	T.		.19	.06	06			.45	.52	.09		2.42
Cleveland (2)	....do	.15	.04	.03	.09			.12	.03	.06	.12	.10	.10			.02			.16		.06			.17					.59	.08	.40		2.32
Conneaut	....do		.10	.25				.02	.35		.12	.17	.35			.12	.06		T.	T.	.28	.12		.20	.11				.30	.35	.11		3.01
Defiance	Maumee	.03	T.	.03	.02	T.	T.	.02			.11	T.				T.				T.	T.			.26		T.	T.		.63	.15	.06		1.31
Findlay‖	....do	.20	T.		T.			T.			T.		T.						.90	T.	T.			.20					.60		.18		2.08
Fremont	Sandusky	.30	T.		.10	T.		T.		.05	.11		.09						.01	T.	T.	.10		.25					.75	.32	.05		2.13
Hedges	Maumee		T.	.10	.10			T.			.30	.10								.10	.20			.46	.40				.80	.21			2.77
Hillhouse	Lake	.32	T.	.16	T.	T.	T.	T.	.09	T.	.05	.23	.30	T.		.20	.05		T.	.10	.22	T.		.12	.37	T.	T.		.50	.16	.47		3.34
Hiram	....do	.17	.13	T.	T.		.03	.03		.16	.02						.08		T.	.12	.12	.20		.20	.20	T.			.45	.40	.34		2.65
Hudson	....do	.22	.18	.16	.14			.10		.05	.10	.10	.05			.30			.05			.10		.10					.15	.10	.05		1.95
Lima	Maumee	T.	T.								.20										.10			.50						.40	.30		1.50
Medina	Lake	.24		T.				T.			.10	.14	T.			T.			.06	T.	.30			.26					.58	.39	.36		2.43
Montpelier	Maumee			.10				.10			.30														.30				T.	.80			1.60
Napoleon	....do			.05	.15	.10						T.							.19						.26				.81	.11	.05		1.72
New Bremen	....do	.08	.02	.08							.16		T.								.08			.25	T.				.60	.41	.09		1.77
North Royalton	Lake	.20	.10	.05	.20					.10	.20	.30	.05			.20			.10		.20								.94	.30	.30		3.24
Norwalk	....do	.40			.10			.10				.10	.10	.05						.11	.05				.25				.63	.10	.48		2.47
Oberlin	....do	.13		T.	.06			.05			.12	.06	T.			.02			.07	.08	.24			.25	T.				.70	.33	.35		2.46
Ottawa	Maumee		T.	T.	.07	T.		T.			.10					T.			T.	.04	.06			.40					1.20				1.87
Sandusky	Lake	.05	T.	.04	.01	.05	T.	.04	T.		.15	.04	.02			T.			.09	.03	.03			.20	.01	T.			.66	.30	T.		1.72
Tiffin	Sandusky	.20	T.	.02	.15	T.	T.	.10	T.	T.	.20	.10	.05			T.			.24	T.	T.	T.		.24	T.	T.	T.		.91	.16	.20	T.	2.57
Toledo (1)	Maumee	.02	T.	.05	T.	T.		.11	T.		.13	.06	T.			T.			.09	T.	T.		.01	.36	T.	.01	.01		.62	.24	T.		1.71
Toledo (2)	....do	.02	T.	.05	.03			.04	T.	T.	.22	.04	.01			T.			T.	.06	T.			.36	.01	.02	T.		.60	.03	.18		1.67
Upper Sandusky	Sandusky	.15			.10		T.				.02	T.	.01						T.	.10	.10	T.	.20	.10					.70	.67	.36	.30	2.81
Vickery	Lake	.11		.05	.10		.01	.05			.13	.02	.06						.02	.03	.03			.26					.73	.33	.06		1.99
Wauseon	Maumee	.02	.01	.05	.04			.07	T.		.19	.04	.01						.08	.02	T.		T.	.32	T.	.02	.01		.71	.20	.01		1.80
Wellington	Lake	.20			.11			.02			.15	.10				T.			.02	.06	.06	.05		.25	.02				.43	.05	.54		2.06
Willoughby‖	....do	.04			.20							.30								.10				.55			.33		.13	.34			1.99

TABLE 2.—*Daily precipitation for December, 1910. District No. 4, Lake Region*—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.
Pennsylvania.																																	
Erie	Lake	.02	T.	.03	.01	T.		.12	.51	.03	.22	.05	.03	T.		.18	T.		.12	.12	.16	T.		.30	.02	.04	.04		.30	.47	.12		2.89
New York.																																	
Adams Center	Lake Ontario	.40							1.80						.20	.60	.20	.50	.20	.40	.10	T.		.10	.10	.20	.20	.30	.20		.40		5.90
Angelica	Genesee	.17	.03	.01	.04			T.	.02	.09	T.	.25	.02	T.		.14			T.	.11	.03	T.	T.	T.	.18		.04		.21	.10	.65		2.09
Appleton	Lake Erie	T.	T.	T.	T.	T.	.02	.23	T.	T.		.04	.06			.30	T.	T.	T.	T.	.03	T.	T.	T.	.10		.21		.31	.15	.30		1.75
Auburn	Oswego	.20	.19							.06				T.		.92					.09	T.		.03		T.	.12		.04	.20	.27		2.12
Avon	Genesee	.02	.10	T.	T.	T.			T.			T.	T.			.18	.10	T.	T.		T.		T.	T.			T.		.30	.07	.06		0.83
Blue Mountain Lake	Raquette	T.	T.	T.	T.	.30	.10	T.	T.							.30									.70		T.		.20	.20	.37		2.17
Brockport	Lake Ontario	.36	.14	T.	.01			T.	.04	.03		.08				.54		.03	T.	.11	.08	.03		T.	.19	T.	.14		.47	.11	.57		2.93
Buffalo	Lake Erie	.10	.11	.02	.09	T.	T.	.31		T.	.03	.05	.02	.03	T.	.26	.03	.06	.01	.36	.05	.04		.20	.04	.01	.10		.45	.55	.06		2.98
Canton	St. Lawrence	.29	.14	T.	.02	T.			.14					.06	.16	.81		.05	.05	.22	.11	.07		.08	.37	T.	.08	.02	.35	.17	.30		3.49
Cape Vincent	do		T.						T.	.08					.02	.31		.05		.30	.03			.60			.04	.27	.23				1.93
Carvers Falls	Lake Champlain																					.71		.07					.40				1.18
Chazy	Chazy	.30													T.	.15		.10									T.		.40				0.95
Dannemora	do	.50	.75						.45						.40	.20		.50	.05	.28					T.		.20	T.	.13	.25	.43		4.14
Elba	Lake Ontario	.60	.20	T.	T.			T.		T.		.20	T.	T.	.20	.60		.20	T.	.60	.60	.20		T.	T.		.20		.60	.40	.60		5.20
Fayetteville	Oswego	.22	.06	.12	T.			T.	T.	.06	T.	T.	T.	T.	T.	.12					T.	.12		T.	.16	T.	T.		.34	.12	.32		1.64
Gabriels	St. Regis	.12	.12	.05	.02				.10	.02					.20	.30	.04	.06	.06	.15	.05	.09				.05	.15	.07	.11	.28	.18		2.22
Harkness	Lake Champlain		.11													.10				.08		.03			.23				.10	.19	.17		1.01
Hemlock Lake	Genesee	.37							T.	T.		T.				.25					T.	T.	T.	T.					*	.79	.25		1.66
Hunt	do	.30							.40																				.70	1.10	.20		2.70
Ithaca	Oswego	.23	.04	T.	.01	T.		T.	.07	.01	T.	.12	.02	T.	.05	.15	T.	T.	.05	T.	.06	T.	T.	.60	.18	T.	.06		.20	.23	.10		2.18
Keene Valley	Ausable	.22	.14	.03	T.				T.	.10				T.	T.	.20	.05	T.	.02	.15	T.	.10			.94	T.	T.		.18	.12	.18		2.43
King Ferry	Oswego	.21	.04						.03			.05	.03	.02		.05					.05				.27		.04		.15	.47			1.41
Lake George	Lake Champlain	.03			T.											.28				.10					.83		T.		.21	.07	.02		1.54
Lake Placid Club	Ausable W. Br.	.15	.23	.05	.05				.10	.50					.15	.65		.15	.10	.18	T.	.20	T.		.15	.10	.15	.10	.31	.56	.56	T.	4.44
Le Roy	Genesee	.40	.13	.05	.04		T.			.07		.11		T.		.34	.06	.02	T.	.14	.06	.03		T.	.09	T.	.06		.45	.21	.41		2.67
Lockport	Lake Ontario	.20	.24	T.	.60	T.	T.	.02	.18	.02	T.	.10	.03	T.		.19	.01	T.	T.	T.	.03	.01		.11	.20		.07		.48	.12	.40		3.01
Louville	Black	.15	.05						.40						T.					.43					.85				.50	.38			2.76
Morla	St. Lawrence	.35	.20	.10	T.			T.	.10						.30	.70	.30	T.	T.	.10	T.	.20			.47		.20	.10	.40	.30	.14	.10	4.06
Nehasane	Beaver	.11	.11	.02	.02	T.			.80	.03					.22	.42	.03	.11	.13	.40	.07	.05		T.	1.02	.04	.10	.02	.41	.21	.72		5.04
North Lake	Black																																
Ogdensburg	St. Lawrence	.12	.04						.04			T.		T.	.24	.55		.02	T.	T.	.31	T.	T.		.50	T.	.10	.02	.12	.10	.60	T.	2.76
Old Forge	Black	.05	.08	.04	.04				.13	.08					.10	.50	.08	.14	.08	.45	.05	.11			1.56	.03	.03	.02	.40	.15	.39		4.51
Oswego	Lake Ontario	.07	.02	.12	.04	T.		T.	.40	T.	T.	T.	T.	.08		.12	.08	.09	.01	T.	.02	.01		.23	.18	T.	.03		.20	.22	.13	T.	2.05
Otto	Lake Erie	.04	.18	T.	T.	.09			.06	.10			T.			.40				.11				.30	T.		.08		.21	.10	T.		1.67
Palermo	Lake Ontario	.26	.30	.20	.06	.05	T.	T.	.64	.04	T.	T.	T.	.01		.01	.31	T.	.22	.05	.01	.21		.05		T.	.10		.80		.50	.20	4.02
Perry City	Oswego	.20	.10	T.					.02	.02		.16		.03	.04	.22				.04	.05	.06			1.04	.04	.05		.06	.20	.43	T.	2.76
Philadelphia	St. Lawrence	.09	.05						.17						.21	.30		.04		.25	T.	.10			.38		.07	.04	.16	.19	.47		2.52
Potsdam	do	.20	.16						.12						.25	.45	.18				.25							.27		.55	.56		2.99
Raquette Lake	Raquette	.28	.09	T.	T.				.46						.06	.21	.12	.19	.42	.06					.89		.12		.37	.31	.78		4.36
Rochester	Genesee	.77	.06	T.	.03	T.		.01	T.	.04	T.	.07	T	.03	.01	.62	.04	.01	.02	.10	.05	.04	T.	.05	T.	T.	.08		.56	.44	.12		3.15
Romulus	Oswego	.36	.26	T.				T.	T.							.42	.02							T.			.30		.01	.13	.30		1.80
Shortesville	do	.07						T.				.50	T.			.18			T.		T.	T.		T.			T.		.30		.45		1.50
Skaneateles	do	.53	.10	.06		T.		T.		.15	.05	T.			.22	.30	.05	.03	T.	.07	.08	.05	.10	.25	.10	T.	T.	.03	.07	.05	.04	.06	2.39
Syracuse	do	.08	.05	.01	T.	T.		.01		.08	T.	.06	T.	T.		.27	T.	T.	T.	.10	.28	.09	T.	.08	.25	.01	.14		.23	.19	.31		2.24
Ticonderoga	Lake Champlain				T.											.14						.40			T.				.22	.01			0.77
Trudeau	Lake Saranac																																
Tupper Lake	Raquette	.10	.10						.10						.05	.18	.12	.08		.10		.30			.60		.05		.40	T.	.70		2.88
Volusia	Lake Erie	.65		.05	T.			.04	1.00	T.		.25	.09	T.		.30	T.		T.	.12	.35	T.		.30	.20	T.			.60	.43	.22		4.60
Wanakena	Oswegatchie		.50						.74						.16	.53	.18			.40	.02					.80	.05		.30		1.00		4.68
Watertown	Lake Ontario	.17	.06	T.				T.	.46						.47	.48		.16	.07	.09	.06	.08			.36	.03	T.	.05	.34	.18	.47		3.53
Wedgewood	Oswego	.12	.10					T.	.05	T.		.12	T.	T.		.40	T.			.01	.01	T.		T.	.30	T.	T.		.17	.08	.30	T.	1.66
Westfield	Lake Erie	.31	T.	.09	.06	T.		.16	.49	T.		.06	.13	T.		.31	T.		.29	.17	.31	T.			.25		.09		.49	.19	.39	T.	3.79
Youngstown	Lake Ontario				.03	.15				.02	.05	.09			.03	.16								.11	.09		.13		.80	.23	.20	T.	2.09
Vermont.																																	
Burlington	Champlain	.22	.09	T.	.01	T.	T.	.02	.02		T.		T.	T.	T.	.17	T.	.01	.02	.04	.17	.35		.06	.88	T.	T.	T.	.24	.11	.05		2.46
Cornwall	do	.40	.08	T.			T.									.29					T.	.35			.75			T.	.30	.10	T.		2.27
Enosburg Falls	do	.08	.07	.01	.01	T.			.01	T.				T.	.20	.26	T.	T.	.05	.15		.15			.87	T.	.06	.01	.07	T.	.70		2.70
Northfield	do	.07	.02	T.	T.			T.	T.	T.				T.	T.	.05	T.	.01	.04	.05	.04	.13		.02	.73	T.	T.	T.	.37	.10	.10		1.70
Wells	do	.27	.21													.24				.24		.60			1.41				.21		.39		3.33

TABLE 3.—*Maximum and minimum temperatures at selected stations, for December, 1910. District No. 4, Lake Region.*

Date.	Duluth, Minn.		Wisconsin. Florence.		Green Bay.		Milwaukee.		Chicago, Ill.		Fort Wayne, Ind.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	19	6	23	18	29	22	28	22	27	21	32	23
2	18	3	22	15	27	21	27	23	29	24	32	25
3	24	18	22	9	26	22	28	23	31	24	29	16
4	24	18	24	6	27	20	32	26	33	28	29	20
5	24	14	23	11	23	20	32	24	32	29	28	18
6	14	− 1	24	8	29	13	27	20	32	24	26	17
7	9	− 2	21	9	23	9	24	11	27	18	26	19
8	6	−10	14	6	15	0	16	8	25	15	26	10
9	16	− 6	17	0	16	− 1	34	7	30	15	29	2
10	25	9	24	5	26	13	32	25	34	27	32	14
11	9	− 1	22	13	24	9	28	7	29	9	32	21
12	10	− 7	21	10	24	9	26	7	24	7	30	15
13	33	6	32	− 3	24	4	27	13	30	19	25	14
14	36	23	36	28	36	22	41	25	41	25	38	17
15	26	10	35	10	32	15	40	22	38	28	36	24
16	20	12	17	− 3	20	8	28	15	34	26	30	17
17	24	10	30	10	31	17	37	23	41	27	38	13
18	31	19	30	11	31	17	32	22	39	26	39	23
19	22	2	30	10	30	13	32	14	33	18	33	28
20	13	− 6	14	9	21	10	19	10	21	12	28	17
21	24	− 1	22	2	19	4	24	8	29	10	27	12
22	30	24	29	5	32	16	34	20	36	24	35	6
23	25	− 2	27	7	32	13	34	15	35	18	48	16
24	7	−11	20	− 1	17	2	19	12	18	9	36	13
25	15	5	19	−12	25	0	30	11	32	13	24	10
26	26	4	20	8	24	17	31	22	32	25	31	20
27	29	14	28	16	31	13	39	28	43	29	40	20
28	24	18	28	19	29	13	38	33	38	33	41	32
29	23	−11	26	16	28	18	35	14	38	19	35	32
30	15	−20	16	−10	21	2	23	7	25	12	33	18
31	30	4	32	5	33	21	36	23	40	25	42	15
Mns.	21.0	4.5	24.1	7.6	26.0	12.3	30.1	17.4	32.1	20.6	32.6	17.6

Date.	Michigan—Upper Peninsula. Escanaba.		Ewen.		Houghton.		Marquette.		Sault Ste. Marie.		Michigan—Lower Peninsula. Alpena.		Battle Creek.		Cadillac.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	30	24	23	19	24	23	28	24	26	16	31	23	30	25	30	24
2	26	21	22	15	23	20	24	20	19	14	24	21	29	22	24	20
3	26	16	25	14	26	20	26	20	18	9	30	20	27	19	27	21
4	23	18	24	13	23	20	25	21	15	9	25	20	25	16	27	16
5	24	18	22	−14	26	20	24	19	18	12	24	20	25	16	23	15
6	29	16	20	12	25	18	25	18	23	9	28	16	25	17	25	5
7	24	11	17	7	19	14	21	11	25	18	27	16	24	13	24	15
8	17	9	16	7	16	10	14	8	18	− 2	22	11	23	17	18	12
9	20	5	19	− 1	20	10	19	6	9	− 7	19	7	20	4	18	3
10	30	13	24	11	26	11	26	12	18	7	28	8	23	8	18	7
11	23	17	20	10	23	16	24	19	22	18	28	19	28	19	26	18
12	26	17	19	9	22	14	24	14	19	10	28	20	30	18	25	16
13	29	10	31	− 9	35	11	37	14	29	10	32	17	28	3	26	20
14	36	27	32	23	36	26	39	28	36	27	37	29	36	10	35	25
15	31	9	32	9	25	12	28	12	32	− 2	33	11	35	18	30	12
16	18	9	20	8	18	10	20	11	5	− 6	15	6	36	10	16	10
17	33	16	23	1	30	18	34	17	26	4	36	14	32	12	34	16
18	34	19	31	2	34	24	33	23	31	26	35	23	35	22	30	22
19	27	11	28	10	25	12	23	14	29	7	30	14	30	22	28	15
20	19	13	17	3	18	14	19	15	12	2	14	11	22	14	18	13
21	23	12	26	− 4	30	15	25	11	24	− 6	22	1	24	10	24	9
22	35	18	33	18	32	23	33	16	32	24	30	12	32	8	30	15
23	31	16	27	15	30	12	31	13	35	22	35	27	34	26	32	25
24	19	13	26	14	14	− 5	16	13	22	− 5	27	13	26	15	26	15
25	27	13	24	−20	22	− 9	24	10	15	−10	23	9	20	− 3	16	4
26	23	10	23	9	27	18	27	16	25	15	28	18	29	18	25	15
27	31	17	30	16	32	23	35	25	34	22	36	22	37	16	30	20
28	30	23	30	2	27	22	29	26	27	16	36	17	36	28	32	25
29	29	12	25	14	30	4	29	9	30	5	34	21	34	30	33	25
30	26	− 3	14	− 2	14	− 3	19	0	5	−13	21	− 2	32	12	25	2
31	32	26	33	7	38	14	35	19	35	− 2	34	7	35	10	35	1
Mns.	26.8	14.7	24.4	7.0	25.5	14.4	26.3	15.6	23.0	8.0	28.1	15.2	29.1	15.3	26.1	14.9

Date.	Michigan—Lower Peninsula. Detroit.		Muskegon.		Saginaw, W. S.		Ohio. Cleveland.		Lima.		Sandusky.		Toledo.		Erie, Pa.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	32	24	34	30	31	23	35	28	30	23	33	26	32	25	35	27
2	26	21	30	28	26	16	28	26	30	25	28	25	31	24	31	25
3	29	25	28	25	30	22	31	25	30	20	32	25	32	25	31	25
4	34	21	25	20	33	13	32	25	33	24	33	26	31	21	31	26
5	27	17	28	20	28	.....	31	27	31	24	32	27	28	18	27	22
6	23	18	26	15	25	.....	28	24	26	23	31	17	25	18	23	16
7	26	18	28	23	27	.....	27	18	28	13	26	14	28	21	25	21
8	22	15	24	19	24	14	23	18	26	13	24	17	27	17	27	20
9	22	11	24	18	22	4	22	16	24	5	23	15	26	14	23	20
10	25	17	24	12	24	7	28	13	32	16	28	14	27	14	26	11
11	28	19	24	22	29	20	28	26	32	22	28	21	30	22	27	23
12	33	19	30	20	30	18	31	20	27	15	29	19	31	20	29	22
13	25	13	33	20	31	9	26	20	26	6	25	10	29	15	27	19
14	35	21	38	32	39	27	36	23	34	17	36	22	38	22	35	23
15	35	10	38	22	35	11	34	19	38	22	34	15	36	14	33	12
16	22	7	24	18	21	9	19	13	25	12	21	9	24	11	20	15
17	30	16	30	20	34	17	29	12	35	15	30	14	31	14	28	17
18	38	22	38	25	36	21	39	20	39	29	39	23	40	24	40	20
19	30	19	30	21	31	20	32	21	33	29	33	21	35	22	32	26
20	19	12	22	19	22	12	21	16	30	19	21	15	22	16	27	18
21	22	10	27	11	23	4	22	16	26	14	22	12	29	14	23	14
22	32	18	33	9	31	12	32	12	33	14	36	14	33	15	34	18
23	32	25	36	30	35	28	38	27	36	22	38	26	35	27	40	32
24	25	18	31	20	29	21	27	18	31	12	28	18	28	18	32	25
25	21	13	23	18	22	1	22	17	21	10	24	17	22	11	25	19
26	30	20	26	18	31	19	37	22	26	20	36	24	34	22	37	20
27	36	19	41	18	40	23	37	23	.....	18	37	23	36	19	38	26
28	36	31	36	24	35	25	47	32	.....	31	46	32	40	32	47	30
29	36	30	34	30	35	30	38	31	38	32	34	31	35	31	40	32
30	30	9	30	16	31	6	32	15	34	17	31	15	31	14	33	14
31	33	10	38	15	35	4	37	13	35	15	39	14	36	14	34	10
Mns.	28.8	17.7	30.1	20.6	29.8	15.6	30.6	20.5	30.7	18.6	30.9	19.4	31.0	19.2	31.0	20.9

Date.	New York. Buffalo.		Canton.		Rochester.		Syracuse.		Vermont. Burlington.		Northfield.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	34	20	29	19	33	23	30	19	29	23	28	22
2	27	18	19	16	26	19	24	19	26	20	25	15
3	31	24	21	13	29	19	28	24	24	17	24	5
4	29	20	16	7	27	21	27	15	19	12	24	3
5	23	16	20	− 4	23	14	17	8	16	− 3	15	− 7
6	23	16	6	− 8	23	13	17	4	9	− 8	8	−13
7	28	16	19	− 9	24	14	24	8	8	− 1	13	− 9
8	27	14	25	7	26	16	26	18	28	8	27	3
9	20	12	7	−15	19	14	18	13	20	− 4	19	− 7
10	24	16	4	−18	23	10	20	10	10	− 9	13	−15
11	24	16	7	−13	23	15	15	6	12	−10	14	−19
12	23	15	8	−16	22	15	14	8	12	− 5	18	−12
13	31	9	22	− 3	28	16	28	12	17	7	17	− 8
14	37	30	34	22	36	26	39	27	38	15	35	9
15	36	8	33	− 5	35	9	36	2	38	0	35	− 2
16	15	6	4	− 8	11	5	10	1	13	1	10	− 6
17	31	13	17	− 6	27	5	28	9	13	0	9	−15
18	40	23	36	12	38	21	35	22	33	12	28	6
19	38	26	36	29	37	29	37	29	39	29	37	16
20	28	13	31	12	29	14	29	16	31	25	30	8
21	16	8	12	− 3	16	10	16	7	25	6	25	6
22	32	12	21	−14	27	7	24	7	12	− 2	15	− 8
23	40	32	39	10	38	26	37	24	32	7	29	− 5
24	32	23	37	28	36	24	38	26	38	31	36	29
25	23	13	28	−10	24	15	26	6	31	− 2	29	− 7
26	34	19	25	−11	35	15	32	6	24	− 5	18	−11
27	36	26	33	21	39	27	38	27	32	24	31	18
28	39	30	33	27	39	30	42	28	33	30	35	24
29	36	30	30	24	35	30	41	33	35	29	39	30
30	30	3	27	−18	32	4	34	− 1	36	− 4	45	− 6
31	32	3	24	−30	27	0	24	− 4	19	−13	4	−14
Mns.	29.6	17.1	22.7	1.8	28.6	16.3	27.5	13.8	24.3	7.4	23.7	1.0