Climatological Data for March, 1910.

DISTRICT No. 4, LAKE REGION.

Prof. HENRY J. COX District Editor.

GENERAL SUMMARY.

In many of its features March, 1910, was unprecedented throughout practically every portion of Climatological District No. 4. The excessive warmth, the extreme dryness both as regards precipitation and relative humidity, the large number of clear days with bright sunshine, the early disappearance of snow and ice, the light wind movement, and the absence of serious storms, make a history for the month without parallel since the beginning of the official records. Never since the Weather Bureau was established has there been such an early opening of spring. With the exception of the northern Lake region and the highlands of the Adirondack and Green mountains, the snow had all melted before the close of the first decade. The frost was out of the ground soon after, as, owing to the continued protection of the snow covering during the entire winter, it had extended to a much less depth than usual. By the end of the month some spring plowing had been done in the southern sections of the district, and the planting of early vegetables in many localities had been completed. Shrubbery buds were beginning to swell even in the extreme northern portions, while throughout the remainder of the district the hardier of the deciduous trees were leafing out, meadow lands were green with the new growth of grass, and early wild flowers were in bloom. Roads had become dusty as a result of the deficient precipitation, abundance of sunshine, and high temperatures. The extreme conditions of precipitation and temperature seriously retard the flow of sap from the sugar maples of the Vermont section, and the total output of sugar and sirup for the season was much less than the average. As a whole, the conditions prevailing at the close of the month were those usually experienced from 3 to 5 weeks later.

TEMPERATURE.

The mean temperatures of the month were far above the normals throughout the entire district. The departures increased quite regularly from east to west, ranging from an average of +8.2° over the Vermont and New York portions to +14.5° in the Lake Superior region. As a matter of fact, the monthly mean temperatures along the western shore of Lake Michigan, and in portions of the Upper Michigan Peninsula, actually exceeded the normal temperatures for April. At Milwaukee, Wis., the excess of the mean temperature of March, 1910, over the April normal was 2.4°, while at Chicago, Ill., the excess was 2.7° Over western Superior, Lower Michigan, and the Indiana and Ohio portions of the district, the March mean temperatures approached on the average to within 1.5° of the respective April normals, the differences increasing thence eastward to about 6° in the Champlain Valley.

A warm area passed across the district during the first 6 days of the month, when maximum temperatures far above the average for the season were recorded generally. A period of cooler weather lasting until the 18th followed, with nearly normal daily temperatures, although, as a rule, the departures were positive on most days of the interval. The lowest temperatures of the month were recorded generally on the 7–10th over the northwestern portions, on the 15th over the central sections, on the 15–18th in New York State, and on the 18th in the Champlain Basin. During the month zero temperatures, or lower, occurred at but 11 stations in the area bordering on Lake Superior. The lowest temperature in this portion of the district was −5°, recorded on the 9th at Ewen, in the Upper Peninsula of Michigan. The coldest weather of the month, however, occurred in the highlands of New York State on the 18th, when temperatures of from −9° to −17° were recorded, as follows: Old Forge, Trudeau, and Tupper Lake, −9°; Raquette Lake, −10°; Gabriels, −16°; Nehasane, −17°.

Following the passage of this area of comparatively cool weather, excessively high temperatures set in, and prevailed until the close of the month. The highest temperatures were recorded generally during the last 3 days of the period over the northern, western, and extreme eastern sections, but the maximum heat was reached in many places over the Indiana, Ohio, and New York portions on the 24th. At most stations new records for high March temperatures were established, and readings of between 80° and 90° were general in all parts of the district, except Minnesota, Vermont, and the highlands of New York. As a rule, however, even in these latter sections unseasonably high temperatures were experienced. The following are the maximums for that portion of each State lying within the confines of the district: Mount Iron, Minn., 76°; Fondulac, Oshkosh, Pine River, and Waupaca, Wis., 83°; Chicago, Ill., 81°; Elkhart and Fort Wayne, Ind., 86°; Iron River, Upper Michigan, 83°; Lapeer, Lower Michigan, 89°; New Bremen, Ohio, 88°; Erie, Pa., 82°; Shortsville, N. Y., 84°; and Cornwall, Vt., 72°.

PRECIPITATION.

The precipitation was greatly deficient, not a single station receiving an amount in excess of its normal. In fact, the month in general was the driest March of which there is any authentic record. The deficiency amounted to more than 1.50 inch from the middle of the Lower Michigan Peninsula northward, and to considerable more than 2 inches over the southern and eastern portions of the district. The drought conditions were acute by the end of the month, especially over the extreme southwestern sections, where the deficiency in precipitation of the previous month had broken all records for February.

Four Michigan stations—Blaney, Ludington, Mount Pleasant, and Montague—were entirely without rainfall or snowfall during the whole period, while 25 per cent of the stations west and north of Ohio received not more than 0.01 inch. Westward from New York State no station received more than 1 inch; and in New York and Vermont, at but 18 stations out of 57 did rain or snow in excess of this amount fall.

In point of time, what precipitation did occur was well distributed, but the individual falls were, of course, very light. Only one 24-hour fall of more than 1 inch occurred, this being 2 inches on the 20th, at Lake Placid Club, N. Y. The greatest 24-hour falls were generally less than 0.25 inch from Ohio westward and northward, and from 0.40 to 0.70 inch over the remainder of the district.

SNOW AND FLOODS.

The entire district had been continuously blanketed with snow since early in December, 1909, and during the week previous to the opening of March the depth on the ground ranged from 3 inches over the extreme southwestern portions to over 40 inches on the Lake Superior shore, and to over 50 inches to the leeward of Lake Ontario. The warm weather of the last few days of February and the first week of March, however, rapidly melted the snow covering along the southwestern limits of the district, and reduced the depths by nearly one-half over the remaining sections. By the 15th the measurable depths were confined almost entirely to Upper Michigan, northeastern New York, and northern Vermont, and by the end of the month even the peaks of the Green Mountains showed but a thin covering.

The snowfall for the past winter over the Lake Erie region was at many stations unprecedented. As the first heavy fall in

December followed immediately a prolonged period of warm weather, the ground underneath the blanket was not frozen to any great depth, and therefore became thoroughly saturated as a result of the January thaws. Consequently, when the extremely heavy snows of February began to melt rapidly under the influence of the high temperatures which ushered in the present month, the discharge was altogether by run-off to the frozen river courses. These conditions resulted in moderate freshets in the rivers of the southern portion of Lower Michigan on the 6–10th, while flood stages in the Maumee and Sandusky rivers occurred during the first days of the month. Ice gorges formed in these two rivers and added considerably to the danger of the situation.

Speaking of the freshets in the Lower Michigan Peninsula, Mr. C. F. Schneider, section director at Grand Rapids, says:

The Grand reached flood stage in its upper stretches on the 5th and in the lower stretches on the 6th and 7th. The crest of the flood, 12.4 feet, passed Grand Rapids on the 8th, and was 1.8 foot above flood stage. This flood caused some loss and inconvenience to merchants who were forced to the expense of moving goods out of basements which were subject to flooding at the stages reached.

The Saginaw reached flood stage at a few stations—the highest reading at Saginaw being just flood stage, 19.1 feet, on the 9–10th.

The following extract from the report of Mr. Montrose W. Hayes, section director, Columbus, Ohio, summarizes the flood conditions of the Maumee and Sandusky rivers:

Maumee.—At Fort Wayne, Ind., the river passed the flood stage (15 feet) on the 28th, going to 15.6 feet. On March 1 it fell to 14.9 feet, but it rose rapidly on the night of the 1st–2d and reached a stage of 16.4 at 8 a. m. of the 2d. After this the rise was gradual to a stage of 17.5 on the forenoon of the 4th; it fell then and passed below the flood stage the night of the 6–7th.

At Defiance the flood stage (15 feet) was not reached: the highest reading was 13.4 on March 1.

At Napoleon the ice broke up on the night of the 25–26th and the reading was 2.7 at 8 a. m. of the 26th. The water rose to a stage of 18.8 on the 2d (passing the flood stage, 13 feet, late on the 28th). There was very little change on the 2d and first half of the 3d, but on the night of the 3d–4th a rapid fall set in and at 8 a. m. of the 4th the gage reading was 10.8.

Houses and industrial plants on low ground were inundated in most of the towns and cities along the river. The greatest damage seems to have been done at Defiance when a gorge in the Auglaize moved and carried with it the $50,000 Francis Street Bridge. No loss of life was reported.

Sandusky.—The rise at Tiffin was from 1.8 on the 25th to a maximum of 8.5 on the 2d; the water was above the flood stage (7 feet) from the afternoon of the 28th to the night of the 2–3d.

At Fremont on the 25th and 26th the stage was 4.5. It was 6.5 on the morning of the 27th. On the morning of the 28th it was 14.7 (4.7 feet above the flood stage). This rapid rise was caused by gorging ice. The maximum stage was 15.8 on March 1. On the night of the 3d–4th there was a fall to a point slightly below the flood stage.

At Tiffin the section known as Mechanicsburg was entirely under water and only the roofs of some of the lower houses were visible. At Fremont 390 houses were surrounded by water and some damage was done by ice. No loss of life was reported. It would be difficult to make any reliable estimate of the amount of loss in money to persons, firms, and corporations, but it is believed to have been great. Steam and electric railway traffic was interfered with and considerable inconvenience was experienced by those dependent upon gas for light and fuel.

The rapid melting of the snow during the first 6 days of March also caused flood conditions in the Genessee River of New York State. There was, however, no damage reported from the high water. Flood conditions were also approached in the Winooski River of Vermont during the first few days of the month, and for a time danger was apprehended at Montpelier. By the use of dynamite, however, the ice was broken up and started toward the lake, thus relieving the situation.

ICE IN THE GREAT LAKES.

On March 1 the amount of ice reported in Lakes Superior, Michigan, and Erie was greater than at the same time in 1909, and in Huron and Ontario apparently somewhat less. Extensive fields were visible at most stations, and many of the harbors were frozen solid, except where the channels had been kept open by ice breakers and by blasting. During the warm weather of the succeeding weeks, however, the ice honeycombed rapidly and the fields steadily decreased.

On the 28th the ice moved out of the Straits of Mackinaw, making the earliest opening since 1893; while Lake St. Clair and the Detroit River were free after the 22d. By the end of the month navigation had been resumed at many ports where winter traffic had not been maintained.

OPENING OF NAVIGATION.

The following dates, reported by Weather Bureau officials, mark the opening of navigation at ports on the Great Lakes which do not maintain winter traffic, and from which vessels cleared during the month of March:

Oswego	March 24
Rochester	March 18
Erie	March 25
Sandusky	March 19
Toledo	March 18
Detroit	March 28
Port Huron	March 22
Alpena	March 12
Green Bay	March 31

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

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota.																				
Cloquet	Carlton	892																		C. I. McNair.
Duluth	St. Louis	1,133	39	37.4	+13.3	70	28	11	9	34	0.44	− 1.11	0.31	3.1	5	11	15	5	ne.	U. S. Weather Bureau.
Floodwood	....do	1,257	6																	M. H. Schussler.
Mount Iron	....do	1,510	16	38.4	+16.8	76	23	4	2	44	0.16	− 1.29	0.06	0.5	3	8	17	6	nw.	Oliver Iron Mining Co.
Stephens Mine	....do	1,500	3	36.2		74	29	− 4	2†	45	0.24		0.13	0.7	4	13	12	6	sw.	Do.
Two Harbors	Lake	614	16	38.1	+13.5	71	21†	9	9	43	0.40	− 1.07	0.40	T.	1	20	11	0	w.	George W. Watts.
Wisconsin.																				
Appleton	Outagamie	795	11	42.1	+11.7	80	29	12	7	43	0.33	− 1.79	0.20	1.8	3	25	4	2	sw.	Wm. O. Thiede.
Ashland	Ashland	647	16	39.9	+16.9	78	23	12	9	49	T.	− 1.58	T.	T.	0	26	2	3	sw.	Sam Wheeler.
Cecil	Shawano	804	3	40.2		80	29	6	10†	41	0.26		0.12	T.	4	11	20	0	sw.	Louis W. Schmidt.
Chilton	Calumet	860	16	42.7[a]	+11.9	82[a]	29	12[a]	9	34[a]	0.14	− 1.99	0.05	1.0	3	14[a]	15[a]	1[a]	sw.	Daniel V. Jones.
Crandon	Forest	1,060	15	37.3	+11.6	68	29†	0	3	41	0.25	− 1.23	0.20	2.5	2	27	3	1	s.	Calvin T. H. Riggs.
Florence	Florence	1,293	19	37.3	+13.3	79	29	6	9†	42	0.17	− 1.83	0.10	1.0	2	21	3	7	nw.	Fred S. Evans.
Fond du Lac	Fond du Lac	800	24	42.1	+11.2	83	29	13	3†	38	0.20	− 1.41	0.10	1.0	2	23	5	3	sw.	Geo. W. Marshall.
Grand River Locks	Marquette	616	14	43.4		82	29	9	9	41	0.02	− 2.22	0.02	0.5	1	27	2	2	sw.	Jerry Parkinson.
Green Bay	Brown	617	24	41.4	+14.6	82	29	16	8	36	0.19	− 2.21	0.08	1.2	4	12	13	6	sw.	U. S. Weather Bureau.
Herbster	Bayfield	700	2																	Wm. Angell.
Iron River	....do	1,096	1	41.0		79	29	11	9	41	0.23		0.10	2.0	3	15	10	6	sw.	Harry C. Hall.
Kewaunee	Kewaunee	590	1	39.4		78	28	16	15	43	0.39		0.24	2.9	3	22	6	3	s.	Eugene V. Kimball.
Manitowoc	Manitowoc	616	59	40.6	+12.1	73	24	17	9	32	0.11	− 1.95	0.05	T.	3	19	7	5	s.	Johanna Lups.
Menasha	Winnebago	764	13								0.14	− 1.69	0.10	0.8	2	25	4	2	sw.	George T. Allanson.
Menominee Falls	Waukesha	842	1	42.4		81	29	13	10	37	0.08		0.08	T.	1	20	8	3	sw.	Arthur H. Christman.
Milwaukee	Milwaukee	681	40	44.2	+13.3	81	29	20	7	38	0.05	− 2.62	0.03	T.	2	19	8	4	w.	U. S. Weather Bureau.
New London	Outagamie	762	14	42.3	+13.6	82	29	12	9†	41	0.12	− 2.21	0.12	T.	1	17	8	6	nw.	August H. Pape.
Oconto	Oconto	590	19	40.4	+11.3	77	29	12	10	34	0.16	− 2.05	0.10	2.0	2	18	12	1	s.	William K. Smith.
Oshkosh	Winnebago	744	21	43.2	+13.0	83	29	13	9	41	T.	− 1.82	T.	T.	0	27	2	2	sw.	Evan Vincent.
Pine River	Waushara	900	15	43.4	+14.3	83	29	14	9†	45	0.01	− 1.77	0.01	T.	1	11	18	2	sw.	George H. Carpenter.
Plum Island	Door	588	2	37.0		71	24†	13	9	34	0.30		0.08		7	12	8	11	s.	John P. Whelan.
Port Washington	Ozaukee	713	17	43.6	+12.5	80	27	20	8†	40	0.05	− 2.64	0.05	T.	1	20	7	4	se.	Richard C. Kann.
Racine	Racine	633	13	43.8	+ 9.6	81	27	18	15	42	0.72	− 2.10	0.67	T.	3	22	4	5	sw.	Daniel Davis.
Sheboygan	Sheboygan	831	12	43.0	+10.3	75	28	19	7	31	0.10	− 2.31	0.05	0.5	2	16	10	5	sw.	Louis C. Meyer.
Sturgeon Bay	Door	600	12	37.8	+11.3	72	28	8	10†	34	0.19		0.11	3.0	3	17	12	2	s.	Adam N. Dier.
Superior	Douglas	671	1	36.8		70	28†	13	9†	37	0.34		0.34	3.5	1	14	16	1	sw.	Edward B. Banks.
Waupaca	Waupaca	857	14	42.6	+13.7	83	29	9	9†	47	0.10	− 2.01	0.10	T.	1	19	6	6	sw.	James H. Flagg.
Illinois.																				
Chicago	Cook	824	40	48.6	+14.2	81	27	26	15	36	0.29	− 2.26	0.24	T.	3	18	11	2	sw.	U. S. Weather Bureau.
Indiana.																				
Auburn	DeKalb	874	14	44.6	+ 7.5	84	24	13	15	49	0.13	− 2.41	0.08		2	16	2	13	sw.	Mrs. Josie B. Kuhlman
Berne	Adams	849		48.5		85	24	16	15	41	0.02		0.02	T.	1	17	14	0	nw.	H. M. Reusser.
Elkhart§	Elkhart	801	8	49.4		86	24	19	15	39	0.42		0.15	T.	3	22	7	2	sw.	Dr. Miles Medical Co.
Fort Wayne	Allen	775	14	48.4	+ 9.5	86	24	16	15	45	0.62	− 3.58	0.02	T.	1	19	11	1	sw.	Orion E. Mohler.
Hammond	Lake	598	19	47.6	+10.5	82	26	18	15	42	0.11	− 2.50	0.11	0.0	1	18	5	8		Carson W. Whitney.
Howe	Lagrange	886	5	45.8		84	24†	16	15	49	0.73		0.53	0.0	2	24	2	5	w.	James E. Zook.
South Bend	St. Joseph	726	17	47.0	+10.0	84	24	16	15	44	0.43	− 2.54	0.26	T.	3	12	9	10	s.	Henry H. Swaim.
Whiting	Lake	606		50.8		84	24	26	15	44	0.22		0.12	T.	3	23	5	3	w.	D. H. Boyd.
Michigan—Upper Peninsula.																				
Baraga	Baraga	623	8	38.8		81	29	4	9	51	0.15		0.15	1.5	1	23	0	8	sw.	D., S. S. & A. Ry.
Bergland	Ontonagon	1,300		37.4		80	29	− 4	9	49	0.19		0.09	T.	3	20	6	5	sw.	Frank McMonigal.
Blaney	Schoolcraft		3	32.0		65	24†	10	7†	44	0.00		0.00	0.0	0	16	15	0	sw.	Dr. S. S. Hackwell.
Calumet	Houghton	1,246	22	35.4	+13.1	73	29	6	7	36	0.28	− 1.33	0.16	0.5	5	17	12	2	w.	E. S. Grierson.
Chatham	Alger	875	9	35.4		77	29	− 2	10	42	0.54		0.18	4.3	8	15	9	7	nw.	U. P. Experiment Station
Deer Park	Luce	610	9																	Mrs. Sara E. McGaw.
Detour	Chippewa	585	9								0.22		0.20	2.0	2	16	14	1	sw.	Dr. F. E. Cameron.
Eagle Harbor	Keweenaw	622	11	35.5	+10.3	70	30	− 1	10	34	0.07	− 1.61	0.04	T.	2	18	12	1	w.	John Nolen.
Escanaba	Delta	612	37	35.6	+12.1	75	24	12	15	36	0.27	− 1.68	0.14	2.0	6	15	8	8	s.	U. S. Weather Bureau.
Ewen	Ontonagon	1,147	9	36.2		79	29	− 5	9	45	0.24		0.12	1.0	4	8	17	6	sw.	W. B. Hatfield.
Grand Marais	Alger	610	9	35.8		68	28	12	14†	28	0.20		0.10	1.5	3	24	2	5	s.	Mrs. Lena Truedell.
Houghton	Houghton	668	9	36.4	+12.6	78	27	7	10	43	0.49	− 1.61	0.27	1.3	9	11	18	2	w.	U. S. Weather Bureau.
Humboldt	Marquette	1,536	13													15[c]	2[c]	11[c]	w.	D., S. S. & A. Ry.
Iron Mountain	Dickinson	1,111	9	40.5[a]		81[c]	30	12[a]	9†	41[a]	0.11		0.05	1.5	3	22	8	1	sw.	Chapin Mining Co.
Iron River	Iron	1,504	13	38.2	+15.9	83	30	0	3†	44	0.90	− 1.49	0.46	1.0	3	23	6	2	nw.	Victor D. Laing.
Ironwood	Gogebic	1,520	7	39.6		78	29	12	8	40	0.04		0.04	T.	1	26	5	0	w.	Prof. J. V. Brennan.
Ishpeming	Marquette	1,536	10	37.7[f]	+16.5	78[c]	29	4[f]	3	38[f]	0.51	− 2.11	0.30	1.1	4	14	15	2	w.	Cliv'd. Cliffs Iron Co.
Isle Royale	Keweenaw	610	3																	John H. Malone.
Mackinac Island	Mackinac	831	10																	M. I. S. P. Com.
Maple Ridge	Delta		4	36.0		77	29	0	10†	45	0.30		0.20	2.0	2	21	7	3	s.	Herman Johnson.
Marquette	Marquette	734	39	38.2	+14.5	82	15	15	14	37	0.21	− 1.87	0.07	1.0	7	5	21	5	w.	U. S. Weather Bureau.
Menominee	Menominee	581	11	38.0	+ 9.8	69	19†	14	2	34	0.10	− 1.56	0.10	1.0	1	27	0	4	sw.	C. & N. W. Ry.
Newberry	Luce	773	8	34.4[a]		72[c]	27	− 4	10	46[b]	0.10		0.10	1.0	1	15	10	6	sw.	D., S. S. & A. Ry.
Powers	Menominee	868	11			81	29				0.10	− 1.70	0.10	1.0	1	13	17	1	sw.	C. & N. W. Ry.
St. Ignace	Mackinac	593	20	34.8	+10.3	69	30†	8	14	33	0.38	− 1.35	0.15	2.2	9	16	10	5	sw.	D., S. S. & A. Ry.
Sault Ste. Marie	Chippewa	614	22	30.4	+ 9.1	64	24	− 1	2	36	0.30	− 1.55	0.10	1.3	7	11	4	16	w.	U. S. Weather Bureau.
Thomaston	Gogebic	1,347	13	38.2	+15.5	78[a]	20	− 4	9	42[a]	0.05	− 1.77	0.05	0.5	1	18	9	4	n.	D., S. S. & A. Ry.
Victoria	Ontonagon	1,263		38.4		80	29	5	9	43	0.11		0.07	0.5	3	19	11	1	sw.	R. S. Schultz, jr.
Watersmeet	Gogebic		1	37.5		78	29	− 3	9	42	0.17		0.09	1.1	2	16	12	3	sw.	B. N. Grant.
Wetmore	Alger	878	13	36.4	+14.4	77	29	− 2	10	43	0.30	− 1.45	0.30	3.0	1	22	6	9	n.	D., S. S. & A. Ry.
Whitefish Point	Chippewa	610	20	30.5	+10.6	62	24	1	17	34	0.42	− 1.86	0.22	2.0	3	16	4	11	nw.	Robert Carlson.
Michigan—Lower Peninsula.																				
Adrian	Lenawee	770	32	46.8	+13.8	85	28	15	15	50	0.24	− 2.24	0.19	0.5	2	7	14	10	s.	B. F. Gibbs.
Agricultural College	Ingham	820	46	44.0	+12.7	82	24	15	15	40	0.40	− 1.98	0.20	1.0	3	22	9	0	s.	Prof. A. J. Patten.
Allegan	Allegan	698	19	47.0	+13.0	81	28†	14	15	38	0.19	− 2.18	0.19	T.	1	13	12	6	w.	Pere Marquette R. R.
Alma	Gratiot	750	23	44.2	+14.1	83	29	13	14	37	0.13	− 2.39	0.08	T.	2	16	10	5	sw.	P. M. Smith.
Alpena	Alpena	609	37	37.4	+12.4	81	29	9	15	39	0.44	− 1.60	0.26	0.8	8	13	6	12	w.	U. S. Weather Bureau.
Ann Arbor	Washtenaw	930	30	44.1	+12.3	83	24	15	15	46	0.48	− 1.74	0.42	0.3	4	13	9	9	se.	University of Michigan.
Arbela	Tuscola	728	14	43.8	+12.2	81	24	17	14	33	0.41	− 2.21	0.41	T.	1	4	20	7	se.	Wm. Atkin.
Battle Creek	Calhoun	822	26	45.2	+11.9	82	24	15	15	40	0.51	− 1.86	0.21	T.	4	21	7	3	s.	Elmer E. Sager.
Bay City	Bay	593	14	42.6	+10.5	82	24	14	15	40	T.	− 3.17	T.	T.	0	11	17	3	sw.	Pere Marquette R. R.
Benzonia	Benzie	832	14	40.8	+12.7	78	29	14	15	37	0.19	− 2.39	0.15	0.5	2	14	9	8	sw.	Martin S. Joiner.
Berlin	St. Clair		21	41.4	+10.7	81	24	13	15	47	0.52	− 1.73	0.34	T.	3	6	20	5	nw.	R. O. Gould.
Big Rapids	Mecosta	906	14	40.7	+11.1	82	29	10	9†	40	0.60	− 2.75	0.30	T.	4	20	6	5	sw.	Charles Gay.
Bloomingdale	Van Buren		6	45.4		81	24	13	15	54	0.30		0.30	T.	1	25	4	2	se.	John M. Haven.
Cadillac	Wexford	1,293	1	39.4		80	29	10	15	34	0.15		0.15	1.0	1	14	11	6	sw.	A. J. Teed.
Cassopolis	Cass	903	9	46.0		82	24	15	15	37	0.20		0.10	0.0	2	25	0	6	sw.	Michigan Central R. R.
Charlevoix	Charlevoix	610	23	35.8[b]	+ 9.4	70[c]	24	10	14	30[c]	0.02	− 1.86	0.02	T.	1	14	13	4	sw.	Pere Marquette R. R.
Charlotte	Eaton		6	44.5		82	24	14	15	40	0.06		0.06	T.	1	17	9	5	sw.	City of Charlotte.

TABLE 1.—*Climatological data for March, 1910. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit. Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Precipitation, in inches. Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Michigan—Lower Peninsula—Cont'd.																				
Cheboygan	Cheboygan	611	20	33.9	+ 8.5	76	30	6	10†	36	0.55	− 1.57	0.55	T.	1	13	14	4	sw	E. A. Bouchard.
Clinton	Lenawee	830	20	45.6	+ 9.8	83	24	15	15	50	0.38	− 2.05	0.23	0.0	2	17	13	1	nw.	David Woodward.
Coldwater	Branch	984	13	47.2[a]	+10.9	83[a]	24	14[a]	15	38[a]	0.22[a]	− 2.82[a]	0.12[a]	0.0	2[a]	23[a]	5[a]	2[a]	sw.[a]	Lake Shore & Mich. So. Ry.
Concord	Jackson	.....	5	45.0	.....	82	24	14	15	38	0.15	.....	0.15	0.0	1	17	14	0	sw.	Dr. W. N. Armstrong.
Croton	Newago	685	2	41.8	.....	77	29	11	15	37	0.25	.....	0.25	T.	1	11	18	2	sw.	G. R.-Mus. Power Co.
Detroit	Wayne	730	39	44.0	+11.1	81	24	17	15	40	0.38	− 1.99	0.34	0.1	4	14	11	6	e.	U. S. Weather Bureau.
Durand	Shiawassee	799	3	44.8	.....	82	24	14[a]	15	40[a]	0.48	.....	0.31	T.	2	25	6	0	w.	Grand Trunk Ry.
East Tawas	Iosco	590	13	38.2	+ 8.5	77	24	11	15	39	0.33	− 2.58	0.15	0.0	3	29	1	1	sw.	Detroit & Mackinac Ry.
Eloise	Wayne	640	13	44.4	+ 9.3	81	24	15	15	46	0.34	− 2.08	0.32	T.	2	17	18	6	w.	John Gilmore.
Flint	Genesee	730	21	44.4	+13.5	84	24	15	15	40	0.62	− 1.28	0.30	0.0	4	20	7	4	s.	Wm. L. Fisher.
Frankfort	Benzie	589	6	38.4	.....	69	27	12	15	32	0.30	.....	0.30	0.0	1	18	0	13	s.	Capt. Geo. Morency.
Ganges	Allegan	665	1	44.2	.....	79	29	16	14	34	0.42	.....	0.26	T.	2	26	1	4	sw.	H. H. Hutchins.
Gaylord	Otsego	1,367	5	36.8	.....	70	29	8	14	38	0.10	.....	0.10	T.	1	18	0	13	sw.	Michigan Central R. R.
Gladwin	Gladwin	794	14	40.0	+11.7	82	29	10	15	43	T.	− 2.17	T.	0.0	0	25	4	2	s.	Geo. R. Smith.
Grand Haven	Ottawa	628	29	41.8	+11.0	72	27	17	15	35	0.21	− 1.30	0.11	0.4	5	18	8	5	s.	U. S. Weather Bureau.
Grand Rapids	Kent	707	21	45.0	+12.0	82	29	17	15	35	0.08	− 2.44	0.04	T.	3	14	8	9	sw.	Do
Grape	Monroe	625	20	45.0	+10.4	84	24	16	15	51	0.22	− 2.04	0.15	T.	2	11	19	1	sw.	Joseph W. Morris.
Grass Lake	Jackson	989	4	44.6	.....	84	25	21	9†	54	0.11	.....	0.06	T.	2	27	2	2	sw.	Menzo Conklin.
Grayling	Crawford	1,147	21	39.2	+14.5	73	28	2	10	44	0.40	− 1.62	0.30	4.0	2	21	9	1	nw.	Dr. Oscar Palmer.
Harbor Beach	Huron	635	22	40.2	+10.9	84	29	12	15	42	0.20	− 1.41	0.20	0.0	1	25	1	5	s.	Pere Marquette R. R.
Harrison	Clare	1,159	17	41.0	+14.8	82	29	8	10	39	0.46	− 1.58	0.46	T.	1	6	22	3	sw.	Do.
Harrisville	Alcona	616	26	38.8	+12.5	81	24	9	15	42	0.66	− 2.02	0.20	1.5	5	17	7	7	sw.	Dr. D. W. Mitchell.
Hart	Oceana	698	18	40.4	+10.0	71	28†	16	9†	30	T.	− 2.32	T.	0.0	0	25	6	0	s.	Pere Marquette R. R.
Hayes	Huron	620	20	40.0	+10.0	80	25†	10	16	44	0.15	− 2.11	0.15	0.0	1	27	0	4	nw.	C. F. Leipprandt.
Highland	Oakland	830	18	.....	.....	.....	.....	.....	.....	.....	0.74	− 1.78	0.24	2.5	4	.....	.....	.....	.....	A. D. De Garmo.
Hillsdale	Hillsdale	1,150	13	45.0	+11.3	82	24	14	15	40	0.07	− 3.12	0.07	T.	1	22	3	6	sw.	Prof. C. L. Herron.
Holland	Ottawa	610	4	42.2	.....	79	27†	14	15	34	0.14	.....	0.07	T.	3	15	12	4	sw.	City of Holland.
Howell	Livingston	924	18	44.0[d]	+11.4	81[d]	24	12[d]	15	47[d]	0.65	− 1.47	0.35	0.0	3	19[d]	5[d]	3[d]	sw.	Frank Sharp.
Ivan	Kalkaska	.....	21	38.4	+11.8	82	29	3	10†	37	0.12	− 1.85	0.10	1.0	3	13	11	7	sw.	O. L. Giddings.
Jackson	Jackson	927	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michigan Central R. R.
Jeddo	St. Clair	667	21	40.8	+10.4	77	24	16	15	34	0.74	− 1.11	0.41	0.4	6	17	8	6	sw.	William Bice.
Kalamazoo	Kalamazoo	955	34	46.7	+13.9	83	24	12	15	38	0.35	− 2.16	0.15	0.5	4	22	6	3	s.	Kalamazoo Asylum.
Lansing	Ingham	881	23	45.0	+13.0	83	24	15	15	40	0.55	− 1.86	0.21	0.3	4	19	7	5	se.	State Board of Health.
Lapeer	Lapeer	827	11	44.3	+10.1	89	27	14	15	48	0.31	− 1.64	0.31	T.	1	11	18	2	sw.	Michigan Home.
Ludington	Mason	586	12	41.4[d]	+ 9.8	72[d]	29	16[d]	15	35[d]	0.00[d]	− 2.08[d]	0.00[d]	0.0[d]	0[d]	22[d]	4[d]	1[d]	sw.	Pere Marquette R. R.
Luther	Lake	1,028	....	40.0	.....	83	29	4	9†	41	0.06	.....	0.06	2.0	1	20	7	4	sw.	John W. Nichoson.
Mackinaw	Cheboygan	592	14	34.8	+ 9.0	75	30	6	15	40	0.22	− 1.96	0.20	2.2	2	24	1	6	nw.	Grand Rapids & Ind. R.
Mancelona	Antrim	1,121	14	37.6	+10.4	81	29	5	10†	36	T.	− 1.73	T.	T.	0	23	6	2	s.	Do.
Manistee	Manistee	600	13	42.2	+12.3	80	29	13	10	40	T.	− 2.25	T.	0.0	0	23	7	1	sw.	Pere Marquette R. R.
Midland	Midland	604	11	44.5	+11.6	81	29†	16	16	41	0.01	− 1.75	0.01	0.0	1	15	12	4	sw.	Do.
Montague	Muskegon	660	7	40.2	.....	72	27	14	2†	36	0.00	.....	0.00	0.0	0	12	10	9	sw.	Gerard A. Whitbeck.
Morenci	Lenawee	811	3	46.8	.....	83	24†	15	15	49	0.08	.....	0.06	0.0	2	20	6	5	sw.	George J. Tripp.
Mount Clemens	Macomb	615	10	42.6	+ 9.8	80	24†	16	15	48	0.15	− 1.78	0.15	0.0	1	13	9	9	sw.	Herman Orbits.
Mount Pleasant	Isabella	826	11	41.8	+11.7	78	24	12	16	56	0.00	− 2.48	0.00	0.0	0	20	3	8	sw.	Pere Marquette R. R.
Muskegon	Muskegon	587	14	41.5	+ 9.5	72	27†	15	15	34	T.	− 2.48	T.	T.	0	16	5	10	s.	Grand Rapids & Ind. Ry.
Old Mission	Grand Traverse	848	16	38.4[b]	+ 9.7	80[b]	29	11[b]	14†	39[b]	0.16[b]	− 2.26[b]	0.16[b]	0.0[b]	1[b]	12[b]	10[b]	7[b]	sw.[b]	E. O. Ladd.
Olivet	Eaton	934	20	43.7	+11.4	80	24	13	15	37	0.76	− 1.80	0.46	0.2	4	25	1	5	w.	Prof. G. A. Knapp.
Omer	Arenac	616	11	39.5	+11.4	81	25†	14	9	51	T.	− 2.50	T.	T.	0	6	22	9	sw.	Detroit & Mackinac Ry.
Onaway	Presque Isle	826	7	31.6	.....	64	25	7	12	40	0.15	.....	0.10	0.5	2	4[f]	5[f]	16[f]	sw.	Do.
Ovid	Clinton	760	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. B. Faxon.
Owosso	Shiawassee	731	13	45.8	+13.4	83	24	15	15	47	1.00	− 1.61	.....	0.0	2	12	15	4	sw.	Owosso Sugar Co.
Petoskey	Emmet	660	20	36.8	+10.2	77	29	9	14	34	0.39	− 1.65	0.15	T.	5	19	8	4	w.	Grand Rapids & Ind. Ry.
Plymouth	Wayne	725	13	44.6[a]	+10.4	84[a]	24	16[a]	14	55[a]	T.[a]	− 2.42[a]	T.[a]	T.[a]	0[a]	22[a]	4[a]	4[a]	sw.[a]	Pere Marquette R. R.
Pontiac	Oakland	935	10	43.8	+11.9	81	24	15	15	42	0.38	− 1.90	0.32	0.2	3	23	5	3	sw.	Fred W. Shaw.
Port Austin	Huron	618	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Pere Marquette R. R.
Port Huron	St. Clair	639	35	41.8	+12.2	77	28	17	15	38	0.41	− 2.03	0.27	0.2	4	9	10	12	sw.	U. S. Weather Bureau.
Reed City	Osceola	1,033	14	.....	.....	.....	.....	.....	.....	.....	0.05	− 2.17	0.05	0.5	1	19	6	6	w.	Pere Marquette R. R.
Roscommon	Roscommon	1,141	6	35.1[d]	.....	81[d]	29	0[d]	15	46[d]	T.[d]	.....	T.[d]	T.[d]	0[d]	15[d]	7[d]	5[d]	w.[d]	William Marsh.
Saginaw	Saginaw	601	8	45.2	.....	82	24†	16	15	38	0.17	.....	0.10	T.	2	15	15	1	sw.	Postmaster.
Saginaw, W. S.	do	601	15	44.0	+11.5	83	24	14	15	39	0.22	− 2.70	0.10	0.2	4	17	12	2	sw.	Robert B. Hudson.
St. James	Charlevoix	681	4	34.8	.....	72	30	10	2†	40	0.05	.....	0.05	0.5	1	15	7	9	sw.	Rev. N. Wilhelm.
St. Johns	Clinton	779	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	City of St. Johns.
St. Joseph	Berrien	593	23	44.5	+ 8.5	78	29	18	15	41	T.	− 2.52	T.	0.0	0	26	4	1	sw.	City of St. Joseph.
Sandusky	Sanilac	790	1	41.3	.....	82	24	14	15	47	0.38	.....	0.22	0.0	3	20	10	1	e.	Pere Marquette R. R.
Saranac	Ionia	639	15	44.1	+15.4	83	29	12	15	48	0.32	− 1.26	0.16	T.	3	14	9	8	sw.	John Wallington.
South Haven	Van Buren	585	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. M. E. De Diemar.
Stanton	Montcalm	880	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	City of Stanton.
Thornville	Lapeer	975	33	42.3	+10.7	80	24	12	15	38	0.99	− 1.23	0.65	2.0	3	11	16	4	w.	Dr. J. S. Caulkins.
Traverse City	Grand Traverse	588	13	37.4	+ 8.4	82	29	13	15	34	.....	.....	.....	.....	.....	22	1	8	s.	Grand Rapids & Ind. Ry.
Vassar	Tuscola	641	9	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	T.	0	4	22	5	sw.	Pere Marquette R. R.
Wasepi	St. Joseph	842	13	45.6	+10.8	83	24	14	15	37	0.88	− 2.88	0.45	0.0	4	28	0	3	sw.	Chas. A. Palmer.
Webberville	Ingham	884	8	44.6	.....	82	24	20	14	42	0.51	.....	0.26	T.	4	15	14	2	sw.	I. R. Wadsworth.
West Branch	Ogemaw	973	7	32.1[c]	.....	84[c]	28	8[d]	13	52[d]	T.[c]	.....	T.	T.[c]	0[c]	17[c]	8[c]	3[c]	s.	Michigan Central R. R.
Woodlawn	Montmorency	.....	8	33.0	.....	80	30	− 5	15	49	0.65	.....	0.31	3.0	4	19	3	9	w.	T. C. Mathews.
Ypsilanti	Washtenaw	736	25	43.8	+10.6	81	24†	15	15	46	0.30	− 2.20	0.30	0.0	1	8	23	0	sw.	Orin J. Bemiss.
Ohio.																				
Akron	Summit	1,081	23	46.6	+10.0	82	24	20	11†	34	0.49	− 2.74	0.30	1.3	8	16	3	12	s.	Prof. C. R. Olin.
Benton Ridge	Hancock	800	17	48.0	+ 9.4	83	24	23	11	37	0.44	− 2.61	0.42	T.	2	17	11	3	sw.	J. W. Powell.
Bowling Green	Wood	670	30	46.6	+ 9.2	83	24	16	15	41	0.25	− 3.35	0.25	0.0	1	17	10	4	sw.	G. C. Houskeeper.
Bucyrus	Crawford	1,000	15	45.8	+ 7.9	82	24	14	15	38	0.60	− 2.39	0.60	T.	1	18	7	6	sw.	James R. Hopley.
Cleveland (1)	Cuyahoga	762	39	44.6	+10.4	83	24	22	14	33	0.41	− 2.38	0.13	2.7	6	12	14	5	se.	U. S. Weather Bureau.
Cleveland (2)§	do	754	13	45.0	+ 8.0	82	24	23	15	34	0.25	− 2.51	0.09	1.8	4	17	8	6	w.	Rev. F. L. Odenbach, S. J.
Defiance	Defiance	712	16	47.4	+ 9.6	85	24	15	15	50	0.09	− 2.87	0.09	T.	1	30	1	0	sw.	John F. Heilshorn.
Findlay	Hancock	776	21	46.5	+ 8.7	85	24	15	15	43	0.27	− 2.77	0.22	0.0	2	19	9	3	sw.	Dr. E. A. Moser.
Fremont§	Sandusky	628	9	48.4	.....	85	24	17	15	43	0.20	.....	0.20	T.	1	21	7	3	sw.	E. Stanley Thomas.
Hedges	Paulding	725	16	47.8	+ 9.4	85	28	14	15	45	0.29	− 2.93	0.25	0.0	2	16	15	0	sw.	Charles Stutzman.
Hillhouse	Lake	997	18	44.8	+ 9.9	83	24	16	11†	41	0.31	− 2.67	0.24	0.5	3	21	10	0	w.	J. W. Doncaster.
Hiram	Portage	1,260	26	45.8	+11.9	81	24	19	14†	34	0.23	− 3.02	0.09	1.0	4	12	16	3	nw.	Prof. G. H. Colton.
Hudson	Summit	1,153	49	45.2	+ 8.7	83	24	16	11	40	0.69	− 2.48	0.37	2.0	4	22	7	2	s.	Dr. W. I. Chamberlain.
Lima	Allen	875	11	47.7	+ 6.7	85	27	15	16	39	0.13	− 3.68	0.13	0.0	1	26	4	1	w.	Miss Ollie De Long.
Medina	Medina	944	22	46.6	+ 9.3	84	28	15	11	44	0.48	− 2.56	0.36	2.0	2	19	10	2	s.	F. W. Clark.
Montpelier	Williams	880	18	47.3	+12.6	84	24	15	15	47	0.18	− 2.71	0.18	T.	1	24	5	2	w.	G. L. Laser.
Napoleon	Henry	690	24	48.0	+ 9.9	84	24†	17	15	45	0.20	− 2.44	0.20	T.	1	26	3	2	w.	A. C. Senter.
New Bremen	Auglaize	1,038	17	50.4	+10.0	88	24	18	15	46	0.02	− 3.27	0.02	0.0	1	17	14	0	nw.	Miss Lillian Grothaus.
North Royalton	Cuyahoga	1,000	18	45.9	+ 9.0	82	24	19	11†	35	0.50	− 2.86	0.25	1.5	4	20	7	4	nw.	W. S. Edgerton.
Norwalk	Huron	719	24	48.3	+10.7	85	24	17	15	40	0.29	− 2.75	0.29	T.	1	27	1	3	s.	Dr. Albert Sheldon.

TABLE 1.—*Climatological data for March, 1910. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit. Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Precipitation, in inches. Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Ohio—Cont'd.																				
Oberlin	Lorain	855	35	46.6	+10.9	84	24	17	11	40	0.27	− 2.11	0.22	2.0	2	15	10	6	ne.	Prof. F. F. Jewett.
Ottawa	Putnam	720	18	47.7	+ 9.0	85	24	16	15	42	0.25	− 3.03	0.25	0.0	1	3	26	2	sw.	Prof. J. T. Maidlow.
Rome	Ashtabula	894	3																	G. H. Crosby.
Sandusky	Erie	629	33	45.6	+10.4	85	24	21	15	37	0.28	− 2.27	0.37	0.1	2	15	11	5	sw.	U. S. Weather Bureau.
Tiffin	Seneca	775	28	47.2	+10.3	83	24	16	15	33	0.37	− 2.99	0.21	T.	3	15	15	1	s.	Prof. T. H. Sonnedecker.
Toledo (1)	Lucas	769	39	46.6	+11.8	83	24	18	15	37	0.05	− 2.23	0.04	0.1	2	22	8	1	sw.	U. S. Weather Bureau.
Toledo (2)§	do	606	6	46.5		84	24	12	15	43	0.04		0.03	T.	2	19	6	6	n.	J. A. Krance, S. J.
Upper Sandusky	Wyandot	854	27	49.2	+11.9	84	24	16	15	37	0.45	− 2.82	0.40	0.0	3	16	13	2	sw.	Prof. R. J. Kiefer.
Vickery	Sandusky	588	17	46.1	+ 8.6	85	24	17	15	50	0.32	− 2.45	0.19	0.5	4	12	18	1	ne.	John W. Barr.
Wauseon	Fulton	780	38	46.2	+11.7	84	24	15	15	41	0.12	− 3.30	0.09	0.1	3	16	11	4	s.	Thomas Mikesell.
Wellington	Lorain	856	16	47.3	+ 8.9	84	24	17	15	41	0.29	− 2.78	0.18	1.0	4	14	14	3	sw.	W. D. Warren.
Willoughby	Lake	649	16								0.31	− 2.68	0.20	2.0	2	6	16	9	w.	C. J. Richardson.
Pennsylvania.																				
Erie	Erie	713	37	43.0	+ 9.9	82	24	19	15	32	0.53	− 2.13	0.34	1.4	7	10	16	5	w.	U. S. Weather Bureau.
New York.																				
Adams Center	Jefferson	540	19	38.6	+ 9.3	74	31	10	15†	40	2.53	− 1.14	0.50	15.0	10	12	11	8	w.	A. E. Cooley
Angelica	Allegany	1,340	27	38.4[a]	+ 8.0	76[a]	24†	12[a]	18	43[a]	0.54	− 2.37	0.25	3.0	4	8	15	8	w.	Charles P. Arnold.
Appleton	Niagara	270	19	39.6	+ 7.3	77	24	17	14†	47	0.97	− 1.04	0.70	0.5	5	13	11	7	w.	H. A. Van Wagoner.
Auburn	Cayuga	715	41	36.9	+ 3.9	76	24	15	18	41	0.30	− 2.11	0.18	1.0	4	23	6	2	n.	A. H. Underwood.
Avon	Livingston	585	15	40.6	+ 6.5	80	29	12	14	47	0.04	− 1.86	0.02	T.	2	18	6	7		W. G. Markham.
Benson Mines	St. Lawrence		2																	R. C. Folger.
Blue Mountain Lake	Hamilton	1,750	10								1.69	− 1.84	0.57	8.5	7	26	3	2	w.	B. F. Merwin.
Brockport	Monroe	537	14	41.0	+ 9.1	79	29	13	15	46	0.83	− 1.97	0.34	4.0	7	17	8	6	w.	W. H. Lennon.
Buffalo	Erie	767	59	39.7	+ 8.5	72	29	15	15	32	0.68	− 1.94	0.34	3.2	6	12	11	8	sw.	U. S. Weather Bureau.
Canton	St. Lawrence	448	16	35.6	+ 7.9	72	24	4	17	44	1.40	− 1.44	0.46	5.5	10	10	12	9	sw.	Do.
Cape Vincent	Jefferson	246	5	34.8		65	24†	9	16	30	1.26		0.95		4	18	10	3	sw.	Verne M. Rice.
Carvers Falls	Washington	243	12	36.1	+ 6.6	75	29	4	18	43	0.65	− 2.75	0.28	0.0	4	23	3	5	s.	Washburn Fancher.
Chazy	Clinton	151	10	35.7	+ 7.5	68	30	4	17†	34	0.15	− 1.10	0.10	1.0	2	20	3	8	s.	W. R. North.
Dannemora	Clinton	1,490	5	35.1		70	24	− 1	17	44	0.95		0.40	3.0	7	15	4	12	w.	W. N. Thayer.
Elba	Genesee	500	11	39.4	+ 7.8	77	24†	9	15	46	1.25	− 0.95	0.60	4.0	4	20	7	4	sw.	Jos. S. Wilford.
Fayetteville	Onondaga	530	9	42.7		82	28	12	18	42	0.60	− 2.30	0.24	2.0	6	14	8	9	sw.	Dana H. Wells.
Gabriels	Franklin	1,729	8	32.1		70	24	−16	18	48	0.75		0.17	4.4	11	17	4	10	nw.	Sanatorium.
Harkness	Clinton	622	8	36.4		72	28	5	18	43	0.39		0.19	0.0	4	30	1	0	w.	J. W. Harkness.
Hemlock Lake	Livingston	900	12	39.5	+ 7.0	75	24†	16	14†	43	0.15	− 1.90	0.15	T.	1	18	8	5	s.	D. H. Westbury.
Hunt	do	1,321	11	44.0	+ 9.8	82	24	18	11†	37	0.68	− 2.05	0.41	1.0	3	14	13	4	sw.	W. S. Barrager.
Ithaca	Tompkins	928	32	42.0	+ 8.1	80	29	16	18	37	0.30	− 2.14	0.17	1.0	7	14	7	10	se.	U. S. Weather Bureau.
Keene Valley	Essex	1,000	12	35.6	+ 6.2	76	24†	− 2	18	50	1.25	− 1.66	0.84	0.3	6	20	5	6	s.	E. R. Wells.
King Ferry	Cayuga		10								0.35	− 2.07	0.12	1.4	4	18	3	10	nw.	Lucius A. Goodyear.
Lake George	Warren	350	13	37.2	+ 5.6	79	29	0	18	40	0.53	− 3.51	0.29	T.	4	13	16	2	sw.	Charles Forsell.
Lake Placid Club	Essex	1,864	2	32.4		65	24†	1	10	44	4.06		2.00	6.0	8	7	16	8	w.	Henry van Hoevenberg.
Le Roy	Genesee	920	20	42.2	+13.0	82	29	12	15	45	0.77	− 1.99	0.25	1.8	8	18	6	7	w.	F. W. Ball.
Lockport	Niagara	650	23	39.8	+ 6.5	75	29	11	15	42	0.74	− 1.53	0.48	0.2	3	15	4	12	sw.	J. E. Wakeman.
Lowville	Lewis	900	43	37.6[c]	+ 8.5	71[c]	24†	4[c]	18	40[c]	1.00	− 1.50	0.75		2				w.	Charles J. Rice.
Lyndonville	Orleans		14								1.21	− 0.49	0.90		2	25	2	4	sw.	Milton St. John.
Moira	Franklin	200	10	37.0	+ 7.9	74	24	2	17	44	0.97	− 2.39	0.50	4.0	7	8	14	9	w.	C. E. McBride.
Nehasane	Hamilton	1,750	2	31.2		66	24†	−17	18	55	2.77		0.89	9.5	7	17	6	8	w.	A. C. Heyburn.
North Lake	Herkimer	1,822	9	32.2	+ 7.1	67	29	−10	12	50	2.17	− 2.52	0.60		4	15	7	9	nw.	H. A. Paull.
Ogdensburg	St. Lawrence	175	26	36.2	+ 7.1	72	24	4	17	40	1.36	− 1.19	0.68	12.0	4	21	8	2	s.	State Hospital.
Old Forge	Herkimer	1,733	2	32.1		68	24†	− 9	18	44	1.00		0.25	7.2	10	14	10	7		Stuart W. Nelson.
Oswego	Oswego	335	40	38.8	+ 7.4	78	24	14	17	39	0.92	− 1.92	0.35	4.3	11	13	9	9	s.	U. S. Weather Bureau.
Otto	Cattaraugus	1,410	6	42.2		78	25†	11	15	40	0.89		0.66		3	21	6	4		William Winke.
Palermo	Oswego	460	51								0.79	− 2.08	0.20	4.1	8	18	6	7	sw.	E. B. Bartlett.
Perry City	Schuyler	1,038	30	39.9	+ 9.7	80	30	13	10†	44	0.59	− 2.42	0.30	2.8	5	14	8	9	nw.	W. H. Jeffers.
Philadelphia	Jefferson	485	4	37.8		74	24	7	17	42	1.07		0.48	1.5	6	13	14	4	w.	E. D. Babcock.
Plattsburg	Clinton	170	60	36.3	+ 9.6	73	29	5	18	31	0.34	− 1.85	0.17	0.0	4	15	11	5	nw.	T. P. Davison.
Potsdam	St. Lawrence	300	34	37.2	+ 8.6	76	30	3	17	45	0.82	− 1.12	0.52	5.0	4	17	5	9	sw.	Lloyd W. Weed.
Raquette Lake	Hamilton		2	32.7		65	30	−10	18	47	2.43		0.61	11.5	10	17	2	12	w.	R. J. Dunning.
Rochester	Monroe	523	81	41.4	+10.1	81	24	16	14	41	0.73	− 2.20	0.28	3.4	7	15	7	9	w.	U. S. Weather Bureau.
Romulus	Seneca	719	18	42.6	+ 9.2	81	29	17	18	43	0.33	− 2.19	0.30	T.	2	20	3	8	nw.	John H. Coryell.
Shortsville	Ontario	740	11	41.4	+ 8.6	84	29	15	15	46	0.06	− 2.10	0.05	T.	2	22	5	4	s.	C. H. Latting.
Skaneateles	Onondaga		15								0.96	− 2.66	0.35		9					Edward Conron.
Syracuse	do	597	8	41.2	+ 9.8	78	24	15	18	35	0.63	− 1.75	0.26	4.8	9	12	8	11	s.	U. S. Weather Bureau.
Ticonderoga	Essex	344	12	36.3	+ 4.7	74	29	1	17	40	0.61	− 2.07	0.50	0.0	3	18	7	6	s.	Eva M. De Lano.
Trudeau	do	1,620	17	36.2	+ 8.9	72	24	− 9	18	49	1.24	− 1.24	0.24	2.8	10	14	6	11	w.	Daniel Smith.
Tupper Lake	Franklin	1,552	10	33.0	+ 6.9	69	24†	− 9	18	44	0.57	− 2.13	0.20	3.5	7	16	5	10	w.	Aaron W. Maddox.
Volusia	Chatauqua	1,167	11	41.6	+ 9.4	80	24†	10	15	40	0.83	− 1.70	0.52	2.0	5	17	10	4	s.	Benjamin Breads.
Watertown	Jefferson	737	18	38.8[c]	+ 8.4	73[c]	24†	8[c]	17	41[c]										L. L. Allen.
Wedgewood	Schuyler	1,430	21	41.4	+10.6	80	29	14	15†	42	0.46	− 2.34	0.17	2.5	6	23	1	7	sw.	Orlando F. Corwin.
Westfield	Chatauqua	837	14	43.5[b]	+10.1	82[b]	29	11[b]	15	40[b]	0.72	− 1.80	0.34	1.0	5					John R. Rogers.
Youngstown	Niagara		8								0.84		0.44	2.0	5	10	21	0	s.	B. V. Brookins.
Vermont.																				
Burlington	Chittendon	404	3	35.4	+ 8.1	68	29	6	17†	35	0.51	− 1.32	0.18	0.2	7	10	12	9	s.	U. S. Weather Bureau.
Cornwall	Addison	507	17	38.0	+ 8.9	72	29	5	18	36	0.53	− 1.77	0.16	T.	5	14	10	7	s.	C. H. Lane.
Enosburg Falls	Franklin	601	19	35.8	+ 8.4	70	24	− 4	18	42	1.56	− 1.49	0.70	6.0	10	12	8	11	nw.	L. Howe Pomeroy.
Northfield	Washington	876	24	33.7	+ 7.5	69	25	− 3	18	39	0.60	− 2.19	0.33	T.	6	10	10	11	s.	U. S. Weather Bureau.
Rutland	Rutland																			H. L. Hindley.
Wells	do	750	19	35.8	+ 8.3	68	29	3	18	28	1.06	− 2.02	0.61		6	11	13	7	s.	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.
§ 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 March, 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.																																	
Cloquet	Lake																																
Duluth	...do	.04		T.			T.	T.			.11	.20					T.					T.					T.			.03	.06		0.44
Floodwood	...do																																
Mount Iron	...do						T.				T.	.05													T.			T.		.05	.06	T.	0.16
Stephens Mine	...do						T.				T.	.05					.03			T.					.03					T.	.13	T.	0.24
Two Harbors	...do	T.									T.							T.													.40		0.40
Wisconsin.																																	
Appleton	Fox	.03						T.				.20																			.10		0.33
Ashland	Lake										T.	T.						T.		T.										T.	T.		T.
Cecil	Fox	.03		T.			T.					.08					.03			T.											.12		0.26
Chilton	...do	.05	T.	T.				T.				*	.05																		.04		0.14
Crandon	...do			.05							.20																				T.		0.25
Florence	Menominee											.10						T.										T.			.07		0.17
Fond du Lac	Fox	.10		T.								T.																			.10		0.20
Grand River Locks	...do	.02										T.																					0.02
Green Bay	Lake	.03										.08					.01														.07		0.19
Herbster	...do																																
Iron River	...do											.10																			.10	.03	0.23
Kewaunee	...do	.05										.24																			.10		0.39
Manitowoc	...do	T.						.01				.05																	T.		.05	T.	0.11
Menasha	Fox	T.		T.								.04																			.10		0.14
Menominee Falls	Lake	T.										T.																			.08		0.08
Milwaukee	...do	.02										T.																			.03		0.05
New London	Fox	T.										T.																			.12		0.12
Oconto	Lake										.10																				.06		0.16
Oshkosh	Fox			T.								T.																			T.		T.
Pine River	...do	T.		T.				T.				T.						T.													.01		0.01
Plum Island	Lake	.03										.05						.04		.03	.08							.02			.05		0.30
Port Washington	...do	T.										T.																			.05		0.05
Racine	...do	.03												T.							.67										.02		0.72
Sheboygan	...do	T.			.05							.05																			T.		0.10
Sturgeon Bay	...do	T.		T.								.06		.02	T.					T.												.11	0.19
Superior‖	...do											.34																					0.34
Waupaca	Fox											T.																			.10		0.10
Illinois.																																	
Chicago	Lake Michigan	T.						T.				T.		T.	T.					.16	.08						T.				.05		0.29
Indiana.																																	
Auburn‖	Maumee	.08																			T.											.05	0.13
Berne	...do												.02		T.																		0.02
Elkhart‖	St. Joseph	T.	.11					T.							T.						.16										T.	.15	0.42
Fort Wayne	Maumee	.02						T.							T.					T.											T.		0.02
Hammond	Lake Michigan	.11																															0.11
Howe‖	St. Joseph	.53																		.20												T.	0.73
South Bend‖	...do		.26												T.	T.					.12											.05	0.43
Whiting	Lake Michigan	.04													T.						.12										.06		0.22
Michigan—Upper Peninsula.																																	
Baraga	Lake																		.15														0.15
Bergland	Ontonagon						T.					.07								.03											.09		0.19
Blaney	Manistique																																0.00
Calumet	Lake						T.	T.	T.			.04						T.		.05		T.			T.	T.		.01		T.	.02	.16	0.28
Chatham	...do	.13					.02	.06				.18		.04					.03												.03	.05	0.54
Deer Park	...do																																
Detour	St. Marys							.02	.20																								0.22
Eagle Harbor	Lake							T.												.04					T.					.03	T.		0.07
Escanaba	...do	.02		T.			T.	T.				.14		T.			.04	T.	T.	.05							.01	.01		T.	T.	T.	0.27
Ewen	Ontonagon							.10												.12											.01	.01	0.24
Grand Marais	Lake							.16			.05			T.		T.						.65				T.					T.		0.20
Houghton	...do	.01					T.	T.			.04	.07				T.	T.		.01	.01		T.			.03			.05			.18	.09	0.49
Humboldt	Escanaba																																
Iron Mountain	Menominee	T.		T.								.03						.05													.03		0.11
Iron River	...do											.30		.20			T.			.40											T.	T.	0.90
Ironwood	Lake		T.								T.	T.						T.		.04										T.			0.04
Ishpeming	Escanaba						T.	T.				.10						.01		.30						T.					.10	T.	0.51
Isle Royale	Lake																																
Mackinac Island	...do																																
Maple Ridge	...do											.20																			.10		0.30
Marquette	...do	T.					T.	.01				.07		T.	T.		.01			.01					T.			.02		.01	.08	T.	0.21
Menominee	Menominee	T.										.10																					0.10
Newberry	Tequamenon							.10																									0.10
Powers	Lake											.10																			T.		0.10
St. Ignace	...do							.03	.10			.01						.02		.03			.01					T.	.01		.02	.15	0.38
Sault Saint Marie	St. Marys	.06					.01	.07				T.				T.				.10		T.			T.			.03		T.	.02	.01	0.30
Thomaston	Lake										T.						.05														T.	T.	0.05
Victoria	Ontonagon											.07								T.											.02	.02	0.11
Watersmeet	...do	T.					T.					.09						T.													.06	.02	0.17
Wetmore	Lake							.30																									0.30
Whitefish Point	...do						.22	.16																						T.	T.	.04	0.42
Michigan—Lower Peninsula.																																	
Adrian	Raisin																	.05			.19												0.24
Agricultural College	Grand	.10										T.						T.			.20										.10	T.	0.40
Allegan	Kalamazoo	T.						T.				T.									.19										T.	T.	0.19
Alma	Saginaw	T.									.05									T.											T.	.08	0.13
Alpena	Lake	.02					.10	.01			T.	T.		.01		T.				.26		.01					T.	.02			.01		0.44
Ann Arbor	Huron	.01	T.									T.	T.					.02			.42									T.	.03		0.48
Arbela	Saginaw							T.				T.									.41												0.41
Battle Creek	Kalamazoo	.18	.05					T.				T.									.21										T.	.07	0.51
Bay City	Saginaw							T.																									T.
Benzonia	Betsie	.04										T.		T.																	.15		0.19
Berlin	Clinton	.02	.16		T.			T.							T.			T.			.34										T.		0.52
Big Rapids	Muskegon	.10	.10	.10				T.																								.30	0.60
Bloomingdale	Lake	T.						T.				T.									.30											T.	0.30
Cadillac	Manistee	.15						T.				T.		T.																		T.	0.15
Cassopolis	St. Joseph																				.10											.10	0.20
Charlevoix	Lake							T.													.02												0.02
Charlotte	Kalamazoo							T.					T.																		T.	.06	0.06
Cheboygan	Cheboygan						T.	T.			T								.55	T.												T.	0.55
Clinton	Raisin	.23																			.15												0.38
Coldwater	St. Joseph	.12																			.10											T.	0.22
Concord	Kalamazoo	T.										T.									.15											T.	0.15
Croton	Muskegon	T.	T.					T.				T.											T.								T.	.25	0.25
Detroit	Detroit	T.				T.		.01				T.		T.	.02			.01			.34		T.								T.		0.38
Durand	Saginaw		T.	.17				T.				T.	T.					T.			.31										T.	T.	0.48

TABLE 2.—*Daily precipitation for March, 1910. District No. 4*—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	
Michigan—Lower Peninsula—Cont'd.																																	
East Tawas	Lake	.08																		.15											.10		0.33
Eloise	Rouge		.02					T.					T.	T.	T.			T.			.32												0.34
Flint	Saginaw	.05	.15																		.30											.12	0.62
Frankfort	Betsie																														.30		0.30
Ganges	Lake											T.									.16											.26	0.42
Gaylord	Cheboygan							T.				T.								.10													0.10
Gladwin	Saginaw	T.																		T.													T.
Grand Haven	Grand	.02					T.	.02				.04		T.	T.				T.		.02										.11		0.21
Grand Rapids	...do	.01		T.			T.	T.				T.		T.							.04	T.									.03		0.08
Grape	Raisin	.15						T.						T.	T.			T.			.07												0.22
Grass Lake	Grand		.06					T.				T.						T.			.05												0.11
Grayling	Au Sable						.10	.30					T.	T.					T.		T.					T.							0.40
Harbor Beach	Lake																				.20												0.20
Harrison	Saginaw	T.																														.46	0.46
Harrisville	Lake	.06						.15												.20	.10											.15	0.66
Hart	Pentwater																														T.		T.
Hayes	Pigeon																				.15												0.15
Highland	Huron		.24										.18		.10						.22										T.		0.74
Hillsdale	Saint Joseph	T.	T.					T.				T.		T.	T.						T.										T.	.07	0.07
Holland	Lake							T.				T.			T.						.05										.07	.02	0.14
Howell	Saginaw	.25	.35										T.								.05										T.	T.	0.65
Ivan	Manistee	T.						.10			T.	T.								.01											T.	.01	0.12
Jackson	Grand																																
Jeddo	St. Clair	.05	.22					.02	.02	.02				T.	T.						.41												0.74
Kalamazoo	Kalamazoo	.15						.05				T.									.10											.05	0.35
Lansing	Grand	.15						T.				.06		T.				T.			.21										T.	.13	0.55
Lapeer	Saginaw						T.	T.													.31												0.31
Ludington	Pere Marquette																																0.00
Luther	Manistee	.06						T.				T.		T.						T.											T.		0.06
Mackinaw	Lake						.02	.20																									0.22
Mancelona	...do	T.					T.	T.				T.							T.													T.	T.
Manistee	Manistee																														T.		T.
Midland	Saginaw																															.61	0.01
Montague	White																																0.00
Morenci	Maumee																				.06											.02	0.08
Mount Clemens	Clinton		T.																		.15												0.15
Mount Pleasant	Saginaw																																0.00
Muskegon	Muskegon	T.										T.																			T.	T.	T.
Old Mission	Lake																				.16												0.16
Olivet	Kalamazoo	.22						T.				.03		T.							.46											.05	0.76
Omer	Lake	T.																															T.
Onaway	Cheboygan						.10	.05																									0.15
Ovid	Grand																																
Owosso	Saginaw																				.50											.50	1.00
Petoskey	Lake						.10					.02								.15	T.										.02	.10	0.39
Plymouth	Rouge											T.						T.															T.
Pontiac	Clinton	T.	.05					T.				T.			.01			T.			.32										T.		0.38
Port Austin	Lake																																
Port Huron	St. Clair	.12						.01						T.	.01	T.		T.			.27		T.								T.		0.41
Reed City	Muskegon	.05																															0.05
Roscommon	Au Sable							T.		T.		T.	T.							T.	T.											T.	T.
Saginaw	Saginaw	.10	.07				T.	T.				T.	T.		T.						T.		T.								T.	T.	0.17
Saginaw, W. S.	...do	.10	.02					.02	T.			T.	T.		T.			T.			T.										T.	.08	0.22
St. James	Lake							.05																									0.05
St. Johns	Grand																																
St. Joseph	St. Joseph	T.																															T.
Sandusky	Lake		.14																		.22										.02		0.38
Saranac	Grand	T.	.04					T.				T.									.12										T.	.16	0.32
South Haven	Lake																														.20		
Stanton	Grand																																
Thornville	Saginaw		.24												.10						.65												0.99
Traverse City	Lake																																
Vassar	Saginaw							T.																									T.
Wasepi	St. Joseph	.45																			.28										.03	.12	0.88
Webberville	Grand	.14	.06					T.				T						T.			.26											.05	0.51
West Branch	Lake	T.						T.																									T.
Woodlawn	Au Sable							.20				.10									.31										.04		0.65
Ypsilanti	Lake																				.30										T.	T.	0.30
Ohio.																																	
Akron‖	Lake	.05						.03	.02						.01	T.		.04			.30	T.	.03								.01		0.49
Benton Ridge	Maumee							T.						T.						.42										.02			0.44
Bowling Green	Lake																				.25												0.25
Bucyrus	Sandusky													T.	T.					T.	.60												0.60
Cleveland (1)	Lake	T.	T.	T.			.01	.07						T.	.13		.07	T.			.12		.01							T.	T.	T.	0.41
Cleveland (2)	...do						.02	T.							.09		.08				.06		T.							T.			0.25
Defiance	Maumee							T.													.09												0.09
Findlay‖	...do						T.														.22	.05											0.27
Fremont	Sandusky					T.		T.						T.	T.			T.			.20												0.20
Hedges	Maumee																			.25	.04												0.29
Hillhouse	Lake							T.							.03			.04			.24		T.										0.31
Hiram	...do							.05						T.	.01			.09		T.	.08		T.							T.	T.		0.23
Hudson	...do														.10			.20			.37		.02										0.69
Lima	Maumee																				.13												0.13
Medina	Lake						T.	T.						T.	.12			T.			.36												0.48
Montpelier	Maumee											T.			T.			T.			.18										T.	T.	0.18
Napoleon	...do							T.												T.	.20												0.20
New Bremen	...do						T.					T.								.02	T.												0.02
North Royalton	Lake							.10							.05			.10			.25									T.			0.50
Norwalk	...do							T.													.29												0.29
Oberlin	...do						T.	T.							.05			T.			.22									T.			0.27
Ottawa	Maumee																			.25	T.												0.25
Rome	Lake																																
Sandusky	...do						T.	T.						T.	T.		T.	.01			.27		T.							T.			0.28
Tiffin	Sandusky						T.	T.						.01	T.			T.		.15	.21		T.							T.			0.37
Toledo (1)	Maumee			T.		T.		.01						T.	T.			T.			.04		T.										0.05
Toledo (2)	...do					T.	T.	T.						T.	.01						.03		T.										0.04
Upper Sandusky	Sandusky						.05							T.	T.					T.	.40												0.45
Vickery	Lake						.03							.05	.05						.19												0.32
Wauseon	Maumee	T.	.02					T.				T.		T.	T.			.01			.09								T.				0.12
Wellington	Lake							T.						T.	.05			T.			.18		.03							.03			0.29
Willoughby‖	...do														.20						.11												0.31
Pennsylvania.																																	
Erie	Lake			.02			.04	.02						.03	.07					T.	.34		.01							T.	T.	T.	0.53

TABLE 2.—*Daily precipitation for March, 1910. District No. 4*—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
New York.																																	
Adams Center	Lake	.12	T.		.04			.46	.40	.10				.27	.50	.20	.10				.34						T.					T.	2.53
Angelica	Genesee	T.						.25	.03					T.	T.	.12					.14												0.54
Appleton	Lake	T.					.15	T.	T.					.05	.05						.70		.02										0.97
Auburn	Oswego						.18	.02						T.	.06	T.					.04										T.		0.30
Avon	Genesee	T.							.02					T.	T.	T.					.02												0.04
Benson Mines	St. Lawrence																																
Blue Mountain Lake	Raquette						.57	.15	.35	.15				.10	.10											.27							1.69
Brockport	Lake							.34	.03					.09	.05	.04					.24		.04										0.83
Buffalo	Lake	T.					.15	.02	T.					.13	.23	T.	T.	T.			.14		.01								T.		0.68
Canton	St. Lawrence	.01	.07				.29	.17	.13	T.				.26	.27	.04	T.		T.		.13		T.								T.	.03	1.40
Cape Vincent	...do		T.					.22						.95			T.				.06											.03	1.26
Carvers Falls	Lake	.28	.13											.10									.14										0.65
Chazy	...do														.10							.05											0.15
Dannemora	...do	.10	T.				*	.40	T.	.10				T.	.12	.05	T.	.05		T.	.13	T.	T.			T.	T.				T.	T.	0.95
Elba	Lake							.25	T.					T.	.20	.20					.60												1.25
Fayetteville	Oswego	T.	T.					.24	.04	T.				.08	.04	.06	T.				.14		T.									T.	0.60
Gabriels	Lake	.02	.02	T.				.16	.07	.05				.08	.17	.02	.10				.02										*	.04	0.75
Harkness	...do	.08						.19													.03											.09	0.39
Hemlock Lake	Genesee						.15	T.															T.										0.15
Hunt	...do						.18								.09						.41												0.68
Ithaca	Oswego	.05	T.	.02			.10	.07	T.	T.				T.	.03	.01	T.				.02		T.								T.	T.	0.30
Keene Valley	Au Sable	.08		T.				.84	.03	T.				.05	T.						.16											.09	1.25
King Ferry	Oswego	.04					.12								T.	.11					.08												0.35
Lake George	Lake	.16						.29					T.	T.		T.					.04											.04	0.53
Lake Placid Club	Au Sable, W. Br.	.41	.05	T.		T.	.50		.30	T.				.10	.20		T.				2.00										*	.50	4.06
Le Roy	Genesee						.09	.25	.03					.07	.06	.02	T.	T.			.24		.01								T.		0.77
Lockport	Lake							*	.20					.06			T.				.48		T.										0.74
Lowville	...do							.75													.25												1.00
Lyndonville	...do							.31													.90												1.21
Moira	St. Lawrence	T.	.01	T.				.33	T.	T.				.03	.50	.02	.01			T.	.07										T.		0.97
Nehasane	Lake	.10								.54				.13	.29		.11				.89										*	.11	2.17
North Lake	...do	.85						.60													.32						.40						2.17
Ogdensburg	St. Lawrence	T.	.08					.55						.05	.68		T.				T.		T.									T.	1.36
Old Forge	Lake		.03			T.	*	.24	.25	.10				.16	.10	.05	.02				.03											.02	1.00
Oswego	...do	.02	.01				.20	.13	.02	.01				.07	.35	.03	T.				.07		T.								T.	.01	0.92
Otto	...do						.20	T.									.03				.66												0.89
Palermo	Lake						.06	.11	.10					.01	.20	T.	T.			.01	.10		T.								.20		0.79
Perry City	...do			.08				.30						T.	.10						.09		.02								T.		0.59
Philadelphia	St. Lawrence		.08					.48	T.					.11	.17		T.			T.	.21		T.									.02	1.07
Plattsburg	Lake	.08						.17													.04											.05	0.34
Potsdam	St. Lawrence	T.						.05	T.					.10	.52		T.				.15											T.	0.82
Raquette Lake	Raquette	.28	.09	T.			*	.56	.43	.17				T.	.11	.08	.02			T.	.08										*	.61	2.43
Rochester	Genesee		T.	T.			.26	.02	.01		T.			.09	.15	T.	T.	T.			.17		.03								T.		0.73
Romulus	Oswego						.30							.03																		T.	0.33
Shortsville	...do							T.						.01	T.						.05												0.06
Skaneateles	...do	.05					.05	.35	.13			.03	.12	.06	.02		T.				.15	T.											0.96
Syracuse	...do	.09	T.				.18	.08	.03	T.				.05	.07	.02	T.				.10		.01								T.	T.	0.63
Ticonderoga	Lake							.50							T.	T.					.01											.10	0.61
Trudeau	...do			.07				.16		.24	.14	T.	.02	.09	.10	.03						T.	.19									.20	1.24
Tupper Lake	St. Lawrence	T.	.02					.20	T.					.05	.09		.10				.10											.01	0.57
Volusia	Lake	.03					T.	.09						.10	.09						.52		T.										0.83
Watertown	...do																																
Wedgewood	Oswego	.10						.17	.04					T.	.07	.03					.05		T.										0.46
Westfield	Lake						.02	.09						.06	.21						.34		T.										0.72
Youngstown	...do						.11	.18						.02	.09						.44												0.84
Vermont.																																	
Burlington	Lake	.01	T.			T.		.08	T.	T.				.13	.02	T.	T.				.18						T.				.05	.04	0.51
Cornwall	...do	.10						.10						.16							.15											.02	0.53
Enosburg Falls	...do	.11	.02				.70	.05							.32	.04	.05			T.	.17		T.				.08					.02	1.56
Northfield	...do	.16	.02			T.		.33	T.	T.					T.		T.				.05						T.				.02	.02	0.60
Rutland	...do																																
Wells	...do	.18	.08					.61							.05						.07		T.									.07	1.06

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

Date.	Duluth, Minn.		Wisconsin. Florence.		Green Bay.		Milwaukee.		Chicago, Ill.		Fort Wayne, Ind.		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.	Max.	Min.	Max.	Min	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	34	21	39	18	37	23	36	32	40	34	50	32	34	22	37	27	37	27	42	18	34	13	37	27	40	31	34	22
2...	40	19	40	14	40	22	40	32	47	34	49	31	39	19	40	5	37	25	41	21	35	− 1	43	24	41	29	36	20
3...	34	24	39	11	44	20	43	32	47	33	52	37	36	16	41	− 4	39	13	40	22	34	5	42	22	48	27	42	20
4...	51	26	54	12	46	27	57	37	55	40	63	29	41	19	53	10	46	18	54	30	45	26	43	33	48	29	50	31
5...	36	29	49	24	50	32	46	38	63	46	69	32	47	26	60	23	40	31	45	34	49	24	47	28	64	31	58	26
6...	41	14	46	27	45	30	49	34	58	38	69	44	51	26	42	4	45	19	49	22	39	26	51	30	61	37	45	37
7...	30	14	31	15	33	19	34	20	38	30	49	31	29	19	20	6	28	17	28	18	26	17	30	22	38	23	37	17
8...	34	14	32	10	37	16	35	22	41	26	45	28	36	16	29	10	24	15	29	17	27	17	33	20	37	25	31	16
9...	34	11	30	6	34	18	34	24	36	31	44	22	31	13	27	− 5	24	10	26	16	24	10	34	15	41	22	32	12
10...	33	18	38	6	38	17	39	25	36	31	47	25	34	13	35	15	39	7	40	16	34	1	36	12	42	20	35	11
11...	40	29	35	26	38	31	42	31	50	32	50	22	34	29	30	5	37	28	35	29	34	17	38	21	42	21	35	22
12...	51	27	48	23	41	30	47	32	52	36	55	26	37	30	32	10	51	26	48	30	37	23	42	30	48	28	39	30
13...	42	27	42	22	43	26	46	28	51	34	57	37	42	23	39	8	42	19	48	21	36	16	41	20	47	33	37	24
14...	28	19	24	10	31	19	29	22	34	28	41	25	26	12	37	4	23	15	22	15	21	4	24	13	34	22	24	12
15...	54	26	47	11	47	19	45	24	46	26	44	16	48	12	45	12	44	15	49	17	35	4	36	9	40	15	34	10
16...	40	26	43	21	40	30	41	33	45	36	57	30	35	22	38	18	30	21	32	21	28	12	34	21	51	32	32	15
17...	31	25	32	18	34	27	37	32	42	35	52	26	28	20	45	12	33	17	29	20	27	2	26	16	43	27	34	15
18...	52	25	49	15	55	28	62	32	69	37	69	25	39	19	56	25	52	21	54	24	40	12	39	17	65	25	52	18
19...	66	34	65	36	66	42	69	49	69	51	66	32	56	35	61	48	58	41	65	45	57	32	66	39	69	42	61	41
20...	56	31	53	32	53	36	57	36	59	40	67	49	48	30	60	40	46	29	49	31	27	23	49	27	60	48	54	33
21...	68	39	65	22	60	33	62	35	65	38	64	25	46	28	67	48	65	27	67	30	47	19	55	24	58	25	53	25
22...	49	33	59	36	56	34	57	40	60	44	74	47	50	38	66	40	49	32	54	29	48	29	55	35	73	48	58	41
23...	66	33	59	25	65	29	65	37	76	40	76	38	43	26	58	23	70	30	57	30	43	28	47	33	69	35	65	31
24...	64	36	69	47	72	55	76	60	79	61	86	41	75	39	55	32	72	34	72	42	64	36	80	46	82	45	69	52
25...	60	26	61	31	66	39	72	53	66	55	76	39	55	35	57	25	45	32	47	32	37	31	50	38	69	48	57	41
26...	48	32	61	30	61	37	54	42	70	52	75	35	53	34	62	42	44	30	46	33	48	26	52	33	73	40	68	40
27...	61	33	74	34	77	41	79	41	81	56	84	41	64	37	73	50	78	35	68	34	46	31	47	36	77	41	74	41
28...	70	38	70	44	74	48	67	49	69	57	84	55	73	40	75	58	64	42	72	45	60	31	72	45	78	49	71	50
29...	60	37	79	41	82	56	81	48	76	63	80	42	55	40	79	24	73	42	81	44	60	34	81	42	77	55	80	52
30...	57	33	71	54	73	44	73	44	76	47	74	58	56	40	72	49	76	43	72	46	63	40	74	51	73	58	75	66
31...	58	36	56	32	58	41	60	41	58	45	70	42	52	35	57	32	50	34	46	34	49	28	55	34	67	41	66	36
Mns	48.0	26.8	50.3	24.3	51.5	31.3	52.7	35.6	56.6	40.5	62.5	34.3	44.9	26.2	49.9	22.5	47.1	25.6	48.6	27.9	40.8	19.9	47.1	27.8	56.6	33.9	49.6	29.3

Date.	Michigan, Lower Peninsula. Detroit.		Muskegon.		Saginaw, W. S.		Cleveland.		Ohio. Lima.		Sandusky.		Toledo.		Erie, Pa.		New York. Buffalo.		Canton.		Rochester.		Syracuse.		Vermont. Burlington.		Northfield.	
	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...	44	31	36	30	39	27	50	34	52	33	50	33	50	31	48	32	42	34	40	31	48	36	47	34	39	31	39	33
2...	43	32	37	24	40	29	43	31	47	32	40	32	44	33	44	32	41	33	42	33	43	34	44	35	42	34	40	32
3...	48	33	42	26	45	27	42	33	45	37	44	35	48	37	39	32	40	28	39	27	44	31	43	31	41	28	41	22
4...	54	34	51	33	56	33	56	32	60	30	59	32	57	33	53	31	50	29	41	25	49	28	46	28	42	26	40	21
5...	62	38	57	30	63	32	59	42	66	36	56	38	61	38	56	39	58	44	51	31	59	39	57	39	43	28	45	17
6...	64	35	50	32	61	37	67	36	60	39	69	36	68	38	67	35	66	36	55	28	67	37	61	35	51	26	48	19
7...	36	25	32	21	39	22	36	26	40	31	37	28	39	28	36	24	36	24	50	25	40	26	40	26	43	29	38	28
8...	38	27	35	23	39	23	36	26	43	28	40	27	44	28	34	24	32	24	28	20	33	24	32	24	30	24	30	24
9...	39	27	33	20	38	20	34	28	41	23	35	26	42	27	33	27	34	27	30	19	32	26	32	25	34	20	33	17
10...	35	28	33	19	40	20	31	27	44	27	35	28	37	27	32	25	36	25	33	13	34	23	36	20	31	14	29	7
11...	39	27	36	24	43	24	38	27	50	23	41	26	46	26	34	23	41	25	36	18	40	24	40	21	37	16	35	6
12...	51	32	38	24	49	30	46	32	53	29	44	34	54	32	42	27	46	29	47	26	51	30	46	31	42	26	38	15
13...	47	27	40	31	47	28	48	26	56	37	50	28	52	28	43	27	40	21	43	27	43	22	48	28	40	23	41	12
14...	29	23	36	22	30	18	27	22	42	25	28	23	31	23	27	20	22	17	27	17	22	16	28	18	36	21	37	23
15...	38	17	38	15	38	14	36	22	51	22	39	21	42	18	35	19	33	15	25	13	29	17	25	16	31	20	32	16
16...	46	28	40	32	39	29	41	27	54	15	49	30	52	29	38	29	36	26	34	14	37	25	39	25	38	16	38	13
17...	33	27	42	29	37	22	32	28	49	28	34	29	37	27	30	23	30	20	15	4	25	19	28	15	18	6	18	4
18...	53	28	60	29	60	25	56	28	66	30	50	31	54	30	45	26	44	25	32	8	38	20	36	15	33	6	31	− 2
19...	66	36	57	42	70	39	68	44	65	28	69	46	68	44	68	42	60	37	54	19	67	34	62	34	46	21	45	12
20...	59	32	55	38	61	41	56	34	65	34	55	36	60	36	57	34	51	34	51	32	52	33	56	35	44	32	53	32
21...	51	32	52	24	58	24	52	29	61	26	57	33	58	33	49	30	41	31	44	25	51	30	51	29	43	25	43	26
22...	69	38	64	41	66	46	64	41	68	43	66	42	73	43	62	42	49	39	55	34	59	43	60	43	50	35	55	38
23...	54	37	69	35	66	31	55	37	73	39	51	38	49	39	50	33	53	34	40	26	44	35	53	33	38	27	48	28
24...	81	41	65	50	83	44	83	50	83	54	85	51	83	46	82	50	70	44	72	28	81	40	78	46	63	28	68	29
25...	68	39	54	42	66	47	62	42	75	42	66	46	73	52	65	44	52	35	61	37	69	37	71	36	64	41	69	42
26...	60	38	69	44	68	38	55	41	72	38	56	40	59	39	51	38	47	33	42	34	48	37	43	34	41	36	42	34
27...	70	43	72	42	72	41	76	46	85	46	80	43	80	43	70	42	64	36	48	27	56	35	56	31	44	32	48	32
28...	77	59	63	46	76	52	74	62	81	55	72	61	81	60	72	62	62	41	69	36	74	52	76	52	62	35	64	34
29...	74	54	72	56	82	52	81	57	77	54	80	59	80	60	80	55	72	40	68	41	80	48	78	52	68	47	69	40
30...	73	59	68	54	75	59	78	60	77	58	78	65	76	61	78	66	68	54	59	48	74	62	75	61	58	41	66	33
31...	60	43	60	40	68	41	68	43	68	45	67	43	61	47	70	41	68	36	66	43	70	47	68	45	57	45	54	40
Mns	53.6	34.5	50.2	32.8	55.3	32.7	53.2	35.9	60.3	35.1	54.3	36.8	56.7	36.6	51.3	34.6	47.9	31.5	45.1	26.1	50.3	32.6	50.2	32.2	43.6	27.1	44.4	23.5