Climatological Data for June, 1910.

DISTRICT No. 4, LAKE REGION.

Prof. HENRY J. COX District Editor.

GENERAL SUMMARY.

The unseasonably cold weather of the latter half of April and the entire month of May continued throughout this region until near the close of the second week in June, record-breaking temperatures during this period being reported very generally. At the close of the second week a decided change occurred, and during the balance of the month warm weather prevailed, the temperature being exceptionally high in the northern and western portions of the region. The heat together with the drought, which was general, except in the Lake Champlain watershed, seriously effected pastures and growing crops. Many rivers were reported low and wells and springs were drying up, so that water had often to be carried from a considerable distance.

The cool weather which had persisted for two months was caused by a remarkable succession of high-pressure areas moving across the country with their centers well to the northward, thus producing northerly winds in the Great Lake region. At the beginning of June an area of high barometer central in Alberta gradually spread out, and by the 3d reached from the northern Rocky Mountain region eastward across the upper Mississippi Valley and Great Lake region. Rains preceded the advance of and immediately followed this area. A second area of high pressure immediately followed and so persisted over the Lake region as to force to the southward a storm advancing from the west, and as a consequence the ensuing rainfall was confined to the lower Lake region.

By the 14th the high-pressure areas took a more southerly course and, with the ensuing southerly winds, the temperature rose rapidly and remained with few exceptions far above the seasonal normal during the balance of the month.

The total number of rainy days (.01 inch or more) ranged from none at 2 stations in the Upper Michigan Peninsula to a maximum of 15 in the Green Mountains of Vermont. The percentage of sunshine was, as might be expected, far above the normal, except in the extreme east portion. For the Lake Superior region, taken as a whole, the month was the warmest and driest on record, and quite generally in the western and northern Lake region forest fires prevailed and smoke from these fires proved a serious menace to navigation in the Straits of Mackinac and St. Marys River.

The month was remarkably free from wind storms and there were but few thunderstorms of consequence. On the 27th a storm passed over the Maumee and Sandusky valleys during which 1 man and 8 cattle were killed. Snow pellets were observed at Chicago during a storm on the 2d, and on the same date light snow also occurred in the western Lake Superior region. Frosts were reported in northern Michigan on the 1st–4th; in northern Ohio on the 2d and 4th; in New York and Vermont on the 3d, 4th, and 5th, and on the 7th in the Wisconsin moorlands. The month as a whole was a remarkable one for both heat and cold; also over the greater portion of the district for dry weather.

Extracts from reports of section directors and other officials making special reference to the extreme conditions follow:

Minnesota.—By far the warmest and driest June in the history of the Duluth station. The maximum temperature reached or exceeded 90° on 7 dates. This is a greater number than for any July or August. The average occurrence of temperatures of 90° or higher has been but 1 per summer. The drought is unprecedented as June has been almost uniformly a wet (frequently the wettest) month. The total this month, 0.11 inch, is the third smallest on record for any season of the year. (Previous records: 0.10 inch, February, 1877; 0.09 inch, October, 1895). The mean temperature, 66°, exceeded the previous record by 3°. The maximum temperature, 97°, broke all previous records.—*H. W. Richardson, Local Forecaster.*

Wisconsin.—The weather was very dry and remarkably free from severe storms. The last 3 days of the month were especially warm with maximum temperatures near 100° on each day at most stations. There were numerous forest fires in the northern woods, causing much smoky weather in even the southern portion of the State. The rivers fell slowly and at the end of the month extremely low water conditions were reported over the whole State.—*H. B. Hersey, Section Director.*

Upper Michigan.—The rainfall for the month at Escanaba was decidedly deficient. As a result forest fires started about the 11th and continued during the remainder of the month, causing considerable damage. Light smoke or light haze continued nearly all the time from the 13th to the end of the month; dense smoke occurred on the 29th. High temperatures occurred the last 2 days, 91° on the 29th, and 94° on the 30th. The latter lacked but 2° of the highest temperature on record at this station, 96° on June 28, 1890, and was equaled only on one other occasion, August 3, 1888.—*H. S. Cole, Observer, Escanaba.*

Lower Michigan.—The mean temperature at Detroit averaged 10° below the normal during the 1st to 12th, and slightly more than 5° above the normal during the remainder of the month. The total movement of wind was 7,752 miles. This is the least number of miles recorded during any month since the anemometer was placed in its present position on May 30, 1907.—*N. B. Conger, Inspector, Detroit.*

Indiana.—The rainfall was light and scattered and much less than the normal amount. The greater portion fell during the first week, the remainder being made up of small amounts, which fell in connection with thunderstorms on several dates scattered throughout the month. By the end of the month, the dry weather had assumed the proportions of a drought, and was seriously injuring the growth and development of some of the staple crops. Such vegetation as was well advanced toward maturity was not materially affected.—*V. H. Church, Section Director.*

Ohio.—A minimum temperature of 34° was recorded on the 2d at 5 stations in the northwestern portion of the State and 33° was recorded in Richland and Lorain counties on the 4th. Frost was reported on the 2d in Hardin, Paulding, and Sandusky counties, and in Sandusky County on the 4th. Vegetation made very little growth during this cold period.—*J. Warren Smith, Section Director.*

New York.—Unusually cold weather prevailed at the beginning of the month, and the temperature gradually lowered until the 4th, on which date the lowest temperatures of the month were recorded. Frosts occurred extensively on the 3d, 4th, and 5th, and were particularly severe and widespread on the 4th, covering nearly all that part of the State lying in District No. 4. Over one-third or more of the area the temperatures as recorded fell to 32° or below on that date, and frost occurred in some localities where it had been previously unknown in June. The cold weather of the first 13 days of June was remarkable in its duration as well as in its intensity, the average temperature for the period being nearly 10° below normal for the entire section.—*W. M. Wilson, Section Director.*

Vermont.—Heavy frost occurred at Norfolk on the mornings of June 4 and 5, with minimum temperatures of 32° and 28°, respectively. Ice formed on both mornings, and the ground was slightly frozen in places. This was the lowest temperature ever recorded at this station in June, the lowest previous record being 30° on June 7, 1894. Considerable damage was done to corn, strawberries, and garden truck. Reports vary as to the damage done to the apple crop by the frosts of May and June. Some report much dropping of winter apples, while others state but little damage has been done. On the whole, it is probable that but little damage has been done to the early apples, while the crop of winter apples may be reduced one-fourth to one-third.—*W. S. Shaw, Local Forecaster, Northfield.*

The following extract is taken from the Ogdensburg Journal of June 6:

Reports from all sections of northern New York show that the severe frost of Friday and Saturday nights was widespread, and many thousands of dollars' damage was done to vegetable gardens, corn, clover, potatoes, hops, and especially to small fruits just budding or blossoming. The ground in some sections was frozen hard. Ice formed on all still ponds of water, and in the woods it was not melted by the sun until nearly noon. Potatoes, corn, and tomatoes that stood up strong and vigorous the day before were flat on the ground after the frost, blackened and dead. The oldest inhabitants do not recall as hard a freeze so late in the season. Considerable damage was done to crops and garden truck in St. Lawrence County on Saturday night. Corn is turning black and replanting will be necessary in many instances.

TEMPERATURE.

The average temperature of the month was below normal in the southern half of the Lower Michigan Peninsula and thence eastward to the eastern limits of the district, while in the Lake Superior watershed and the western Lake Michigan section it was far above the normal. The greatest excess was 7.8° at

Duluth, Minn., while the greatest deficiency was 3.8° at Northfield, Vt. The reason for this great difference in temperature between the eastern and western portions of the region is that the cold weather of the first part of the month moderated 2 days earlier in the western than in the eastern section, and although during the second half of the month the temperature was high over the whole district, excessive temperatures were confined mostly to the western portion.

PRECIPITATION.

While there was a nearly normal rainfall during the month in the Lake Champlain watershed and central New York, the amount decreased rather regularly thence westward to the drought stricken sections of the upper Lake region. The largest monthly fall, 4.62 inches, occurred at Nehasane, N. Y., while but a trace was reported from Humbolt and Powers, in the Upper Michigan Peninsula. Where a moderate amount of rain fell, it was confined mostly to the first half of the month, so that even in the eastern sections moisture was needed by the end of the month. There were but very few instances when heavy individual rains occurred.

DAMAGE TO FRUIT FROM FROSTS OF APRIL AND MAY.

Serious damage to fruit was reported quite generally in the MONTHLY WEATHER REVIEW of April and May as the result of the severe frosts and it was thought advisable to secure supplementary reports from the various section directors upon the subject, as it has been realized that often some time must elapse after a freeze before the amount of injury can be definitely determined. The following reports should prove interesting, bringing the information up to date:

Minnesota.—Currants and gooseberries will yield about one-tenth of the average; practically all other fruits are a total loss, except that there will be a few late apples, and a small yield of other very late fruits.—*U. G. Purssell, Section Director.*

Wisconsin.—All fruit was injured considerably, but apples will be at least half a crop. Cherries about the same. Strawberries are about over and were less than half a crop. Blackberries and raspberries about half a crop. —*H. B. Hersey, Section Director.*

Michigan.—Peaches were not materially damaged by the frosts of April and May. Apples and plums, however, were seriously injured ,and it is estimated that the crop will not be more than one-third of what it would have been had not the late frosts occurred. Grapes were seriously injured on low ground, but not to such a great extent on the high lands; the early buds were killed and the later ones, which afterward developed, appear to promise small and straggling bunches of grapes.—*F. H. Coleman, Acting Section Director.*

Indiana.—The extent of and damage from frost were not nearly as great as early reports from fruit growers indicated. Practically all fruits, however, were injured to some extent. Apples, the most generally grown fruit in the State, suffered less from frosts and freezing temperatures than other fruits. Conservative estimates place the yield at 25 per cent in excess of that of last year, which was a light crop. These figures would therefore indicate one-half or two-thirds of a full crop for this season. The less hardy tree fruits, particularly peaches, suffered an almost complete loss in the northern part of the State, but the conditions in the southern counties were more favorable. Some experimental work for the prevention of frost by smudging, when frost warnings were issued, was conducted with good results as far as small fruits were concerned. The extent of such experiments in peach orchards however, is believed to have been very limited, and no direct reports of results therefrom were obtained. I believe that, with proper smudging apparatus, much effective work could have been done during the latter part of April in the orchards of this State. Berries of all kinds were damaged to some extent. In some localities they will not exceed one-half a crop, while in others nearly the usual quantity will be harvested.—*V. H. Church, Section Director.*

Ohio.—Reports indicate a very serious injury to the fruit crop in most sections of the State. However, in the principal fruit belt that extends along the south shore of Lake Erie, there was very little damage and a large crop of peaches especially is promised; so large, in fact, that orchardists are thinning out the green peaches in order to save the trees from breaking.—*J. Warren Smith, Section Director.*

New York.—Such reports as have been received indicate that the damage has been more serious than was supposed a month or so ago.—*W. M. Wilson, Section Director.*

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

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit. Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Precipitation, in inches. Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Minnesota.																				
Cloquet	Carlton	892																		C. I. McNair.
Duluth	St. Louis	1,133	39	65.5	+ 7.8	97	28	35	4	36	0.11	− 4.20	0.04	0.0	4	14	13	3	ne.	U. S. Weather Bureau.
Floodwood	do	1,257	6	60.7		94[a]	20†	27[a]	6	50[a]	0.13		0.07	0.0	4	26	1	3	s.	M. H. Schussler.
Mount Iron	do	1,510	16	66.2	+ 5.6	96	21	31	3†	44	0.35	− 4.04	0.13	0.0	3	19	9	2	se.	Oliver Iron Mining Co.
Stephens Mine	do	1,500	3	64.2		96	21	27	3	44	0.45		0.23	T.	5	17	10	3	s.	Do.
Two Harbors	Lake	614	16	61.1	+ 4.4	94	29	31	5	45	1.56	− 2.62	0.70	0.0	4	4	17	9	ne.	George W. Watts.
Wisconsin.																				
Appleton	Outagamie	795	11	70.6	+ 6.6	99	29†	39	2	39	0.78	− 2.85	0.27	0.0	6	24	4	2	s.	Wm. O. Thiede.
Ashland	Ashland	647	16	65.8	+ 4.4	99	29†	32	3	44	0.51	− 2.92	0.40	0.0	2	24	3	3	ne.	Sam Wheeler.
Cecil	Shawano	804	3	66.8		100	29	35	11	42	0.85		0.70	T.	2	18	11	1	sw.	Louis W. Schmidt.
Chilton	Calumet	860	16	67.8	+ 2.2	98	29†	39	2†	37	1.53	− 3.48	0.46	0.0	5	20	10	0	ne.	Daniel V. Jones.
Crandon	Forest	1,060	15	64.6	+ 1.3	96	29	31	11	44	0.39	− 2.27	0.30	0.0	4	26	3	1		Calvin T. H. Riggs.
Florence	Florence	1,293	19	65.2	+ 3.4	96	29	32	3†	43	1.17	− 2.36	0.77	0.0	3	19	8	3	nw.	Fred S. Evans.
Fond du Lac	Fond du Lac	800	24	66.0	0.0	97	30	36	7	40	0.86	− 2.67	0.36	0.0	3	26	0	4	ne.	Geo. W. Marshall.
Grand River Locks	Marquette	616	14	66.8		98	23†	35	7	43	0.83	− 3.85	0.47	0.0	3	26	3	1	s.	Jerry Parkinson.
Green Bay	Brown	617	24	68.3	+ 3.2	100	30	40	2	33	0.94	− 2.61	0.32	0.0	6	13	10	7	sw.	U. S. Weather Bureau.
Herbster	Bayfield	700	2																	Wm. Angell.
Iron River	do	1,096	1	68.8		99	28	32	3	42	1.90		1.60	0.0	5	22	5	3	s.	Harry C. Hall.
Kewaunee	Kewaunee	590	1	64.0		94	30	38	2	32	1.45		0.43	0.0	6	23	5	2	s.	Eugene V. Kimball.
Manitowoc	Manitowoc	616	59	65.2	+ 3.0	98	30	40	2	34	1.14	− 2.33	0.55	0.0	6	15	13	2	sw.	Johanna Lups.
Menasha	Winnebago	764	13								0.28	− 3.48	0.19	0.0	3	28	1	1	ne.	George T. Allanson.
Menominee Falls	Waukesha	842	1	67.0		96	30	37	2	39	2.06		1.42	0.0	6	23	4	3	e.	Arthur H. Christman.
Milwaukee	Milwaukee	681	40	66.8	+ 3.3	96	29	41	1	28	1.01	− 2.66	0.41	0.0	8	22	3	5	ne.	U. S. Weather Bureau.
New London	Outagamie	762	14	69.1	+ 3.8	104	30	39	2	39	1.16	− 2.88	0.45	0.0	4	20	8	2	sw.	August H. Pape.
Oconto	Oconto	590	19	66.9	+ 2.5	99	30	40	2	35	1.47	− 1.93	0.59	0.0	4	20	8	2	se.	William K. Smith.
Oshkosh	Winnebago	744	21	68.2[c]	+ 2.1	99[c]	30	37[c]	3	35[c]	1.40	− 3.13	0.65	0.0	3	25	3	2	sw.	Evan Vincent.
Pine River	Waushara	900	15	68.4	+ 3.3	101	30	37	1	38	1.21	− 2.64	0.91	0.0	3	17	12	1	nw.	George H. Carpenter.
Plum Island	Door	588	2	64.2		95	30	38	2†	35	0.86		0.68	0.0	4	18	5	7	s.	John P. Whelan.
Port Washington	Ozaukee	713	17	65.7	+ 3.1	93	23	38	2	36	1.06	− 1.79	0.42	0.0	4	22	3	5	se.	Richard C. Kann.
Racine	Racine	633	13	66.2	+ 1.8	99	29	39	1	37	0.90	− 2.23	0.52	0.0	4	20	8	2	ne.	Daniel Davis.
Sheboygan	Sheboygan	831	12	66.8	+ 4.0	96	30	40	1	34	1.83	− 1.31	0.65	0.0	8	20	6	4	se.	Louis C. Meyer.
Sturgeon Bay	Door	600	12	63.2	+ 3.2	100	30	32	2†	38	1.37		0.70	0.0	6	22	7	1	se.	Adam N. Dier.
Superior	Douglas	671	1	62.8		96	28†	35	5	37	0.33		0.19	0.0	4	21	7	2	ne.	Edward B. Banks.
Waupaca	Waupaca	857	14	68.6	+ 3.3	103	30	39	7†	42	0.89	− 3.53	0.63	0.0	4	16	8	6	se.	James H. Flagg.
Illinois.																				
Chicago	Cook	824	40	68.2	+ 1.9	91	17‖	43	3‖	24	0.91	− 2.75	0.41	T.	4	19	8	3	n.	U. S. Weather Bureau.
Indiana.																				
Auburn	DeKalb	874	14	64.8	− 2.5	94	18	33	2	37	0.42	− 3.20	0.23	0.0	3	21	0	9	w.	Mrs. Josie B. Kuhlman.
Berne	Adams	849		67.1		97	23	39	3†	42	1.10		0.54	0.0	7	15	11	3	nw.	H. M. Reusser.
Elkhart§	Elkhart	801	8	69.6		98	30	39	3	35	1.32		0.70	0.0	4	19	9	2	nw.	Dr. Miles Medical Co.
Fort Wayne	Allen	775	14	67.6	− 0.9	98	23†	36	2	45	0.28	− 3.56	0.17	0.0	5	16	6	8	nw.	Orion E. Mohler.
Hammond	Lake	598	19	67.8	− 0.4	94	23	40	1†	41	1.37	− 1.73	0.52	0.0	4	14	14	2		Carson W. Whitney.
Howe	Lagrange	886	5	66.6		97	30	36	2	45	1.81		0.55	0.0	6	22	0	8	sw.	James E. Zook.
South Bend	St. Joseph	726	17	67.5	− 1.1	96	30	37	3	39	1.42	− 1.76	0.62	0.0	7	19	4	7	ne.	Henry H. Swaim.
Whiting	Lake	606		68.4		92	16	43	1†	33	0.46		0.40	0.0	2	15	12	3	ne.	D. H. Boyd.
Michigan—Upper Peninsula.																				
Baraga	Baraga	623	8	62.6		98[c]	30	34	14	55	1.00		0.50	0.0	2	23[a]	0[a]	6[a]	nw.	D., S. S. & A. Ry.
Bergland	Ontonagon	1,300		66.9		95	30	27	3	47	1.57		0.54	T.	5	16	10	4	w.	Frank McMonigal.
Blaney	Schoolcraft		3			98	30				0.14		0.05	0.0	2	20	8	2	s.	Dr. S. S. Hackwell.
Calumet	Houghton	1,246	22	64.2	+ 4.6	92	29†	33	2†	27	0.37	− 2.89	0.18	T.	4	24	5	1	w.	E. S. Grierson.
Chatham	Alger	875	9	60.0		95	30	30	3†	42	1.93		1.16	0.2	5	17	8	5	n.	U. P. Experiment Station
Deer Park	Luce	610	9	57.4		92	16	36	2†	39	1.75		0.60	0.0	5	12	1	17	w.	Mrs. Sara E. McGaw.
Detour	Chippewa	585	9																	Dr. F. E. Cameron.
Eagle Harbor	Keweenaw	622	11	57.9	+ 3.1	94	30	31	3	36	0.24	− 2.97	0.14	0.0	2	11	4	15	w.	John Nolen.
Escanaba	Delta	612	37	63.4	+ 2.8	94	30	36	2	27	1.06	− 2.54	0.45	0.0	7	17	9	4	s.	U. S. Weather Bureau.
Ewen	Ontonagon	1,147	9	61.6		95	29†	27	3	50	0.75		0.45	T.	3	19[g]	0[g]	4[g]	nw.	W. B. Hatfield.
Grand Marais	Alger	610	9	54.2		76	25	32	1	24	0.60		0.20	0.0	4	23	1	6	w.	Mrs. Lena Truedell.
Houghton	Houghton	668	9	65.0	+ 5.5	95	29	34	3	35	0.39	− 3.10	0.26	0.0	6	13	10	7	w.	U. S. Weather Bureau.
Humboldt	Marquette	1,536	13	62.4	+ 5.3	96	28	29	3	50	T.	− 3.18	T.	T.	0	22	6	2	w.	D., S. S. & A. Ry.
Iron Mountain	Dickinson	1,111	9			99[j]	30	35[j]	2†	37[j]	0.71		0.71[g]	0.0	1	14[g]	7[g]	1[g]	ne.	Chapin Mining Co.
Iron River	Iron	1,504	13	63.8		98	29	30	3	45	1.20		0.60	0.0	4	22	6	2	w.	Victor D. Laing.
Ironwood	Gogebic	1,520	7	65.8		95	29	31	3	27	0.10		0.05	T.	4	25	3	2	n.	Prof. J. V. Brennan.
Ishpeming	Marquette	1,536	10	64.4[d]	+ 5.8	97[d]	30	33[d]	2†	46[d]	0.65	− 2.25	0.30	T.	5	17	10	3	ne.	Cliv'd. Cliffs Iron Co.
Isle Royale	Keweenaw	610	3	53.4		75	29	37	3†	30	1.20		0.80	0.0	2	8	4	18	s.	John H. Malone.
Mackinac Island	Mackinac	831	10																	M. I. S. P. Com.
Maple Ridge	Delta		4	62.4		95	30	32	3†	42	1.81		1.02	0.0	5	23	3	4	s.	Herman Johnson.
Marquette	Marquette	734	39	62.6	+ 4.1	93	21	35	3	33	0.82	− 2.69	0.56	0.2	6	11	9	10	w.	U. S. Weather Bureau.
Menominee	Menominee	581	11	66.2	+ 4.5	98	30	39	2	31	0.91	− 2.49	0.51	0.0	2	25	4	1	sw.	C. & N. W. Ry.
Newberry	Luce	773	8	62.5		97	30	34	3†	51	0.56		0.55	0.0	2	21	6	3	nw.	D., S. S. & A. Ry.
Powers	Menominee	868	11	66.8	+ 4.5	101	30	35	3	48	T.	− 4.42	T.	0.0	0	14	14	2	s.	C. & N. W. Ry.
St. Ignace	Mackinac	593	20	62.5	+ 3.3	85	20†	36	1	34	0.85	− 2.30	0.42	0.0	3	18	7	5	se.	D., S. S. & A. Ry.
Sault Ste. Marie	Chippewa	614	22	60.9	+ 3.3	87	21	35	3	37	0.70	− 2.07	0.28	0.0	5	17	6	7	w.	U. S. Weather Bureau.
Thomaston	Gogebic	1,347	13	62.0	+ 1.3	96	30	22	1	48	0.05	− 2.48	0.05	0.0	1	15	12	3	n.	D., S. S. & A. Ry.
Victoria	Ontonagon	1,263		67.5		96	30	30	3	36	0.59		0.23	T.	6	22	5	3	n.	R. S. Schultz, jr.
Watersmeet	Gogebic		1	63.6		97	29†	26	3	50	0.42		0.29	0.0	4	11	13	6	n.	B. N. Grant.
Wetmore	Alger	878	13	60.6	+ 3.2	95	30	31	3†	50	1.05	− 1.47	0.50	0.0	3	24[a]	0[a]	5[a]	n.	D., S. S. & A. Ry.
Whitefish Point	Chippewa	610	20	54.6	+ 1.5	79	22†	35	1†	30	1.30	− 1.27	0.49	0.0	5	16	0	14	nw.	Robert Carlson.
Michigan—Lower Peninsula.																				
Adrian	Lenawee	770	32	67.8	+ 0.1	99	23†	36	2	40	1.65	− 2.75	0.69	0.0	7	7	16	7	w.	B. F. Gibbs.
Agricultural College	Ingham	820	46	64.9	− 2.5	95	30	37	2	35	1.95	− 1.94	0.76	0.0	6	17	7	6	nw.	Prof. A. J. Patten.
Allegan	Allegan	698	19																	Pere Marquette R. R.
Alma	Gratiot	750	23	64.2	− 2.0	96	30	36	2	37	1.54	− 1.58	0.60	0.0	7	14	11	5	w.	P. M. Smith.
Alpena	Alpena	609	37	62.8	+ 2.5	98	30	39	4	35	0.92	− 2.63	0.55	0.0	6	16	8	6	nw.	U. S. Weather Bureau.
Ann Arbor	Washtenaw	930	30	65.6	− 1.5	94	30	38	1†	36	1.51	− 1.97	0.87	0.0	8	17	6	7	nw.	University of Michigan.
Arbela	Tuscola	728	14	64.5	− 1.2	95	23†	34	4	35	1.65	− 1.68	0.58	0.0	6	13	11	6	sw.	Wm. Atkin.
Battle Creek	Calhoun	822	26	66.0	− 2.5	96	23†	35	2	36	1.03	− 2.80	0.37	0.0	6	20	4	6	nw.	Elmer E. Sager.
Bay City	Bay	593	14	65.8	− 0.3	100	30	37	1	37	2.70	+ 0.14	0.90	0.0	7	23	5	5	nw.	Pere Marquette R. R.
Benzonia	Benzie	832	14	64.4	+ 1.9	93	30	37	1	39	0.40	− 1.99	0.13	0.0	4	22	4	4	nw.	Martin S. Joiner.
Berlin	St. Clair		21	64.0	− 1.8	96	30	30	4	42	1.82	− 1.57	0.68	0.0	6	10	13	6	ne.	R. O. Gould.
Big Rapids	Mecosta	906	14	63.4	− 0.5	95	30	33	2	41	1.22	− 1.40	0.31	0.0	6	22	4	4	w.	Charles Gay.
Bloomingdale	Van Buren		6	65.6		94	23†	38	2	38	1.38		0.62	0.0	6	23	5	2	nw.	John M. Haven.
Cadillac	Wexford	1,293	1	64.0[f]		95[f]	23	35[f]	1†	38[f]	1.06		0.40	0.0	5	16[b]	6[b]	6[b]	nw.	A. J. Teed.
Cassopolis	Cass	903	9	66.9		94	22	36	3	39	1.36		0.65	0.0	4	26	0	4	nw.	Michigan Central R. R.
Charlevoix	Charlevoix	610	23	63.1	+ 1.0	92	30	36	1	32	1.37	− 1.34	0.56	0.0	4	22	4	4	nw.	Pere Marquette R. R.
Charlotte	Eaton		6	64.1		95	30	34	2	39	1.25		0.61	0.0	7	18	4	8	nw.	City of Charlotte.

TABLE 1.—*Climatological data for June, 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	62.0	+ 0.3	96	30	32	6	41	1.09	− 1.87	0.40	0.0	4	19	9	2	sw.	E. A. Bouchard.
Clinton	Lenawee	830	20	66.2	− 1.9	98	23	39	1	40	0.94	− 2.08	0.36	0.0	5	12	11	7	nw.	David Woodward.
Coldwater	Branch	984	13	66.5	+ 0.5	96	30	35	2	38	1.65	− 2.08	0.55	0.0	7	19	6	4	nw.	Lake Shore & Mich. So. Ry
Concord	Jackson		5	65.8		99	30	36	2	44	1.89		1.15	0.0	6	17	8	4	nw.	Dr. W. N. Armstrong.
Croton	Newago	685	2	65.2		97	30	36	2	39	1.22		0.32	0.0	7	14	14	2	nw.	G. R.-Mus. Power Co.
Detroit	Wayne	730	39	66.5	− 1.3	95	30	39	1	28	1.47	− 2.42	0.69	0.0	9	13	11	6	e.	U. S. Weather Bureau.
Durand	Shiawassee	799	3	67.0		98	30	37	1	40	1.54		0.41	0.0	8	17	6	6	ne	Grand Trunk Ry.
East Tawas	Iosco	590	13	62.4	+ 0.4	91	30	36	1	32	1.50	− 1.20	0.40	0.0	6	24	3	3	w.	Detroit & Mackinac Ry.
Eloise	Wayne	640	13	66.2	− 0.3	96	30	35	1	39	1.25	− 1.76	0.59	0.0	8	19	7	4	nw.	John Gilmore.
Flint	Genesee	730	21	64.1	− 1.6	92[a]	24	34	1†	31	1.63	− 1.27	0.50	0.0	9	18	7	5	w.	Wm. L. Fisher.
Frankfort	Benzie	589	6					37	1		0.66		0.25	0.0	5	20	0	10	n.	Capt. Geo. Morency.
Ganges	Allegan	665	1	64.8		88	21	38	2	29	1.25		0.74	0.0	6	26	4	0	nw.	H. H. Hutchins.
Gaylord	Otsego	1,367	5	65.0		94	26	35	1	30	0.30		0.17	0.0	3	22	0	8	sw.	Michigan Central R. R.
Gladwin	Gladwin	794	14	66.6	+ 1.2	101	30	36	1	45	0.80	− 1.81	0.70	0.0	2	27	0	3	s.	Geo. R. Smith.
Grand Haven	Ottawa	628	29	64.6	− 1.1	90	21	39	2	29	1.23	− 1.28	0.67	0.0	6	15	11	4	w.	U. S. Weather Bureau.
Grand Rapids	Kent	707	21	65.9	− 1.2	97	30	37	2	31	1.04	− 1.48	0.46	0.0	4	13	8	9	w.	Do
Grape	Monroe	625	20	64.2	− 3.8	95[c]	23	39[d]	1†	38[c]	0.94	− 2.67	0.32	0.0	6	15[c]	6[c]	6[c]	w.	Joseph W. Morris.
Grass Lake	Jackson	989	4	64.4		94	30	38	1	37	1.51		0.90	0.0	6	20	2	8	nw.	Menzo Conklin.
Grayling	Crawford	1,147	21																	Dr. Oscar Palmer.
Harbor Beach	Huron	635	22	60.2	− 2.0	91	22	32	4	39	1.95	− 1.81	0.95	0.0	8	20	3	7	ne.	Pere Marquette R. R.
Harrison	Clare	1,159	17	66.2	+ 2.2	101	30	34	2	39				0.0		21	2	7	nw.	Do.
Harrisville	Alcona	616	26	60.4	− 0.5	91	22	35	4	35	2.50	− 0.93	1.91	0.0	4	19	6	5	sw.	Dr. D. W. Mitchell.
Hart	Oceana	698	18					38	2		0.62	− 1.69	0.32	0.0	3	15	8	5	s.	Pere Marquette R. R
Hayes	Huron	620	20	63.4[a]	− 1.6	93[a]	29	35[a]	4	37[a]	2.69	+ 0.42	0.89	0.0	7	16[c]	4[c]	7[c]		C. F. Leipprandt.
Highland	Oakland	830	18								1.59	− 2.13	0.95	0.0	4					A. D. De Garmo.
Hillsdale	Hillsdale	1,150	13	65.3	− 0.6	96	30	36	2	38	1.06	− 2.55	0.46	0.0	6	20	4	6	nw.	Prof. C. L. Herron.
Holland	Ottawa	610	4	63.4		91	30	35	2	34	0.79		0.58	0.0	5	22	7	1	nw.	City of Holland.
Howell	Livingston	924	18	64.9[b]	− 1.9	94[f]	28	37[f]	1	45[f]	2.40	− 0.38	1.60	0.0	4	8[m]	7[m]	2[m]	sw.	Frank Sharp.
Ivan	Kalkaska		21	64.5	+ 0.1	99	30	33	1	46	0.79	− 2.11	0.34	0.0	5	19	7	4	nw.	O. L. Giddings.
Jackson	Jackson	927	13	66.0	− 2.1	96	30	37	2	38	2.07	− 1.44	1.20	0.0	8	18	7	5	nw.	Michigan Central R. R.
Jeddo	St. Clair	667	21	63.4	− 1.8	94	30	34	4	36	1.26	− 1.66	0.26	0.0	9	13	2	14	ne.	William Bice.
Kalamazoo	Kalamazoo	955	34	66.8	− 1.2	92	30	38	1†	31	1.39	− 2.68	0.72	0.0	3	20	6	4	w.	Kalamazoo Asylum.
Lansing	Ingham	881	23	65.6	− 1.5	95	30	37	2	33	1.48	− 2.02	0.52	0.0	6	19	4	7	nw.	State Board of Health.
Lapeer	Lapeer	827	11	65.6	+ 0.4	95	30	36	4	37	2.27	− 0.67	0.94	0.0	7	15	12	3	w.	Michigan Home.
Ludington	Mason	586	12	64.4	+ 3.0	92	30	33	2	36	1.08	− 1.19	0.45	0.0	3	20	4	2	sw.	Pere Marquette R. R.
Luther	Lake	1,028		64.0		99	30	32	7	42	1.14		0.39	0.0	6	22	3	5	w.	John W. Nichoson.
Mackinaw	Cheboygan	592	14	61.2	+ 1.4	94	30	31	5	33	0.62	− 2.68	0.31	0.0	3	18	3	9	w.	Grand Rapids & Ind. R.
Mancelona	Antrim	1,121	14	63.8	+ 1.0	98	30	28	3	41	0.27	− 2.64	0.10	0.0	5	25	1	4	se.	Do.
Manistee	Manistee	600	13	65.2	+ 2.7	88	30	39	2	27	0.73	− 2.59	0.35	0.0	3	18	4	2	sw.	Pere Marquette R. R.
Midland	Midland	604	11	67.6	+ 1.9	100	30	33	1	46	0.25	− 2.24	0.10	0.0	5	21	5	4	sw.	Do.
Montague	Muskegon	660	7	62.7		92	21†	34	2	32	0.88		0.35	0.0	3	19	8	3	nw.	Gerard A. Whitbeck.
Morenci	Lenawee	811	3	65.2		94	23	35	2	36	1.68		0.67	0.0	6	14	7	9	w.	George J. Tripp.
Mount Clemens	Macomb	615	10			93	18				0.90	− 2.35	0.35	0.0	6	15	13	2	se.	Herman Orbits.
Mount Pleasant	Isabella	826	11					35	2		0.68	− 2.26	0.27	0.0	4	24	3	3	sw.	Pere Marquette R. R.
Muskegon	Muskegon	587	14	64.2	− 0.8	90	30	39	2	28	0.85	− 1.89	0.65	0.0	2	25	1	4	w.	Grand Rapids & Ind. Ry.
Old Mission	Grand Traverse	848	16	63.8	+ 0.4	98	30	34	1	36	0.78	− 1.84	0.41	0.0	3	14[a]	12[a]	3[a]	ne.	E. O. Ladd.
Olivet	Eaton	934	20	64.4	− 1.9	93	30	36	1	37	3.10	− 1.02	0.80	0.0	9	21	3	6	nw.	Prof. G. A. Knapp.
Omer	Arenac	616	11	62.2	− 0.6	96	30	35	1	46	0.70	− 0.95	0.70	0.0	1	16	11	3	w.	Detroit & Mackinac Ry.
Onaway	Presque Isle	826	7																	Do.
Ovid	Clinton	760	20	65.3	− 1.6	96[a]	23	36	1†	37[a]	2.54	− 0.82	0.78	0.0	10	17	6	7	w.	Geo. B. Faxon.
Owosso	Shiawassee	731	13	65.4	− 1.2	96	30	38	1	38	0.80	− 2.07	0.18	0.0	8	13	13	4	nw.	Owosso Sugar Co.
Petoskey	Emmet	660	20																	Grand Rapids & Ind. Ry.
Plymouth	Wayne	725	13	67.2	− 0.3	97	30	39	1	45	2.31	− 1.01	0.80	0.0	6	18	8	4	sw.	Pere Marquette R. R.
Pontiac	Oakland	935	10	66.4	− 1.1	96	30	37	4	36	1.77	− 0.99	0.82	0.0	8	21	3	6	w.	Fred W. Shaw.
Port Austin	Huron	618	14																	Pere Marquette R. R.
Port Huron	St. Clair	639	35	62.6	− 1.2	93	30	37	1	36	1.10	− 2.14	0.38	0.0	10	13	5	12	ne.	U. S. Weather Bureau.
Reed City	Osceola	1,033	14					35	1		0.55	− 2.26	0.20	0.0	3	16	12	2	w.	Pere Marquette R. R.
Roscommon	Roscommon	1,141	6	64.3		98	30†	33	8	47	0.75		0.30	0.0	3	23	2	5	w.	William Marsh.
Saginaw	Saginaw	601	8	67.2		98	30	39	1	36	1.34		0.40	0.0	7	18	10	2	sw.	Postmaster.
Saginaw, W. S.	do	601	15	66.2	− 1.1	98	30	38	1†	37	1.75	− 1.10	0.45	0.0	9	14	13	3	ne.	Robert B. Hudson.
St. James	Charlevoix	681	4	62.6		91	30	30	3	36	0.86		0.51	0.0	3	18	6	6	sw.	Rev. N. Wilhelm.
St. Johns	Clinton	779	17																	City of St. Johns.
St. Joseph	Berrien	593	23	65.4	+ .01	90	21	39	2	27	0.78	− 2.33	0.38	0.0	4	18	8	4	nw.	City of St. Joseph.
Sandusky	Sanilac	790	1	62.2		95	30	31	4	41	1.86		0.85	0.0	7	21	5	4	ne.	Pere Marquette R. R.
Saranac	Ionia	639	15	65.4	− 2.0	100	30	34	2	44	1.17	− 2.69	0.38	0.0	4	17	3	10	nw.	John Wallington.
South Haven	Van Buren	585	14	63.3	− 0.6	88	22	35	1	28	1.20	− 1.08	0.40	0.0	4	22	4	4	ne.	Mrs. M. E. De Diemar.
Stanton	Montcalm	880	17																	City of Stanton.
Thornville	Lapeer	975	33	62.6	− 5.2	90	23†	36	1†	35	3.49	+ 0.04	0.60	0.0	9	13	11	6	ne.	Dr. J. S. Caulkins.
Traverse City	Grand Traverse	588	13	64.1	+ 1.2	91	30	34	1	32				0.0		24	2	4	s.	Grand Rapids & Ind. Ry.
Vassar	Tuscola	641	9	65.7		95	23†	36	4	44	0.37		0.26	0.0	2	17	9	4	nw.	Pere Marquette R. R.
Wasepi	St. Joseph	842	13	64.8	− 1.0	95	30	36	2	38	1.14	− 2.80	0.50	0.0	6	25	1	4	sw.	Chas. A. Palmer.
Webberville	Ingham	884	8	64.2		95	30	37	1†	37	1.95		0.80	0.0	7	21	5	4	w.	I. R. Wadsworth.
West Branch	Ogemaw	973	7								0.56		0.26	0.0	3	18	7	5	s.	Michigan Central R. R.
Woodlawn	Montmorency		8	61.4		94	30	35	1†	44	2.50		1.12	0.0	7	21	3	6	w.	T. C. Mathews.
Ypsilanti	Washtenaw	736	25	65.1	− 1.3	94	30	38	4	36	1.50	− 2.61	0.42	0.0	7	7	21	2	nw.	Orin J. Bemiss.
Ohio.																				
Akron	Summit	1,081	23																	Prof. C. R. Olin.
Benton Ridge	Hancock	800	17	66.2	− 3.4	95	23	38	2	37	1.03	− 2.62	0.30	0.0	8	14	9	7	nw.	J. W. Powell.
Bowling Green	Wood	670	30	65.8	− 2.2	95	23	38	2	38	2.19	− 1.65	1.25	0.0	5	16	7	7	nw.	G. C. Houskeeper.
Bucyrus	Crawford	1,000	15	65.0	− 3.8	92	23	34	2	39	2.69	− 0.95	1.25	0.0	8	13	10	7	sw.	James R. Hopley.
Cleveland (1)	Cuyahoga	762	39	63.6	− 4.3	84	23	41	1	22	2.01	− 1.67	0.77	0.0	9	15	6	9	w.	U. S. Weather Bureau.
Cleveland (2)§	do	754	13	64.4	− 2.8	86	18†	41	1	24	1.98	− 1.06	0.69	0.0	7	17	3	10	nw.	Rev. F. L. Odenbach, S. J.
Defiance	Defiance	712	16	65.0	− 3.4	94	20†	35	2	41	2.57	− 1.09	1.18	0.0	9	19	4	7	sw.	John F. Heilshorn.
Findlay	Hancock	776	21	66.3	− 3.6	97	23	35	2	41	1.23	− 2.68	0.55	0.0	7	22	5	3	sw.	Dr. E. A. Moser.
Fremont§	Sandusky	628	9	65.8		94	23	39	2†	36	2.19		0.72	0.0	6	21	3	6	sw.	E. Stanley Thomas.
Hedges	Paulding	725	16	66.2	− 2.2	94	23	34	2	41	1.62	− 1.78	0.70	0.0	4	20	6	4	w.	Charles Stutzman.
Hillhouse	Lake	997	18	62.4	− 2.8	87	23†	34	4	33	2.57	− 1.04	0.76	0.0	9	16	10	4	w.	J. W. Doncaster.
Hiram	Portage	1,260	26	64.2	− 2.8	88	23†	37	1†	29	1.67	− 2.30	0.84	0.0	7	16	6	8	sw.	Prof. G. H. Colton.
Hudson	Summit	1,153	49	63.8	− 3.7	95	26	39	1†	37	2.10	− 1.67	0.95	0.0	8	20	5	5	w.	Dr. W. I. Chamberlain.
Lima	Allen	875	11	66.2	− 1.6	93	23	36	2	32	2.53	− 1.79	0.78	0.0	6	20	4	6	w.	Miss Ollie De Long.
Medina	Medina	944	22	63.6	− 4.0	93	23	34	4	41	1.91	− 1.33	0.70	0.0	8	16	7	7	nw.	F. W. Clark.
Montpelier	Williams	880	18	66.6	− 1.3	96	23	34	2	42	1.42	− 2.41	0.60	0.0	4	22	2	6	n.	G. L. Laser.
Napoleon	Henry	680	24	66.4	− 2.1	95	23	38	2	36	2.25	− 1.53	1.42	0.0	6	20	4	6	e.	A. C. Senter.
New Bremen	Auglaize	1,038	17	66.2	− 3.2	94	23	39	2	36	2.44	− 0.92	0.93	0.0	7	12	11	7	se.	Miss Lillian Grothaus.
North Royalton	Cuyahoga	1,000	18	64.1	− 3.5	90	26	38	1†	33	2.36	− 1.13	1.02	0.0	7	20	6	4	w.	W. S. Edgerton.
Norwalk	Huron	719	24	64.2	− 4.0	93	23	35	4	39	2.11	− 1.25	0.57	0.0	7	19	1	10	s.	Dr. Albert Sheldon.

TABLE 1.—*Climatological data for June, 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	64.6	− 3.3	90	23	33	4	35	1.69	− 1.93	0.65	0.0	9	16	5	9	nw.	Prof. F. F. Jewett.
Ottawa	Putnam	720	18	66.0	− 3.3	95	23	36	2	37	1.25	− 2.04	0.53	0.0	9	2	24	4	w.	Prof. J. T. Maidlow.
Rome	Ashtabula	894	3																	G. H. Crosby.
Sandusky	Erie	629	33	65.9	− 2.9	90	18	41	1	25	1.74	− 2.08	0.57	0.0	6	16	4	10	w.	U. S. Weather Bureau.
Tiffin	Seneca	775	28	65.8	− 3.7	91	23	40	4	33	2.30	− 1.54	0.75	0.0	8	19	8	3	w.	Prof. T. H. Sonnedecker.
Toledo (1)	Lucas	769	39	67.5	− 1.9	95	30	40	2	28	0.97	− 2.41	0.39	0.0	8	18	5	7	nw.	U. S. Weather Bureau.
Toledo (2)§	....do	606	6	66.5		95	30	40	1†	31	1.27		0.43	0.0	12	18	4	8	ne.	J. A. Krance, S. J.
Upper Sandusky	Wyandot	854	27	66.2	− 3.5	94	23†	41	2	38	1.95	− 2.28	0.45	0.0	9	15	4	11	w.	Prof. R. J. Kiefer.
Vickery	Sandusky	588	17	64.8	− 3.5	93	18†	36	4	38	2.51	− 0.82	0.83	0.0	9	13	8	9	w..	John W. Barr.
Wauseon	Fulton	780	38	65.6	− 3.0	96	23	36	2	38	1.69	− 2.30	0.77	0.0	11	12	14	4	nw.	Thomas Mikesell.
Wellington	Lorain	856	16	65.0[a]	− 3.5	94	23	34	4	39	2.47	− 0.72	1.02	0.0	10	20	0	10	w.	W. D. Warren.
Willoughby	Lake	649	16								2.56	− 0.30	0.62	0.0	9	8	13	9	w.	C. J. Richardson.
Pennsylvania.																				
Erie	Erie	713	37	63.6	− 2.8	83	23	42	1	18	2.01	− 1.63	0.46	0.0	7	8	12	10	w.	U. S. Weather Bureau.
New York.																				
Adams Center	Jefferson	540	19	64.3	− 1.2	86	21	38	4	28	2.46	− 1.40	0.63	0.0	14	16	8	6	s.	A. E. Cooley
Angelica	Allegany	1,340	27	59.8	− 4.4	87	22	30	4	41	0.42	− 3.80	0.11	0.0	8	7	13	10	w.	Charles P. Arnold.
Appleton	Niagara	270	19	63.2	− 1.3	90	22	39	4	32	0.92	− 1.75	0.38	0.0	6	16	8	6	nw.	H. A. Van Wagoner.
Auburn	Cayuga	715	41	63.6	− 2.4	90	22	38	4†	30	1.81	− 2.29	0.58	0.0	5	24	5	1	n.	A. H. Underwood.
Avon	Livingston	585	15	63.2	− 2.2	87	22	35	4	31	2.20	− 1.02	1.12	0.0	7	19	3	8	.....	W. G. Markham.
Benson Mines	St. Lawrence		2																	R. C. Folger.
Blue Mountain Lake	Hamilton	1,750	10								2.74	− 1.97	0.97	0.0	6	22	4	4	w.	B. F. Merwin.
Brockport	Monroe	537	14	64.9	− 1.3	89	22	38	4	34	1.65	− 1.42	0.51	0.0	8	14	11	5	w.	W. H. Lennon.
Buffalo	Erie	767	59	62.8	− 2.3	87	26	41	4	25	1.05	− 2.09	0.44	0.0	8	14	7	9	sw.	U. S. Weather Bureau.
Canton	St. Lawrence	448	16	62.4	− 3.4	85	20	32	4	31	1.98	− 1.35	0.71	0.0	9	13	11	6	sw.	Do.
Cape Vincent	Jefferson	246	5	61.4		80	16†	35	3	25	1.34		0.42	0.0	8	14	12	4	sw.	Verne M. Rice.
Carvers Falls	Washington	243	12	62.2	− 1.8	86	21	33	5	34	2.10	− 2.13	0.90	0.0	6	22	4	4	s.	Washburn Fancher.
Chazy	Clinton	151	10	64.0	− 0.4	87	20	32	4	31	3.58	+ 0.34	1.25	0.0	5	16	3	11	s.	W. R. North.
Dannemora	Clinton	1,490	5	61.5		85	22	30	4	29	2.43		0.66	0.0	11	12	7	11	s.	W. N. Thayer.
Elba	Genesee	500	11	63.2	− 1.4	86	22†	34	4	34	1.25	− 1.78	0.50	0.0	5	19	6	5	sw.	Jos. S. Wilford.
Fayetteville	Onondaga	530	9	64.6		91	22	31	4	32	2.00	− 2.69	0.74	0.0	9	17	8	5	w.	Dana H. Wells.
Gabriels	Franklin	1,729	8	59.0		85	22	25	5	40	2.36		0.67	0.0	14	16	4	10	w.	Sanatorium.
Harkness	Clinton	622	8	61.9		86	22	32	4	29	2.18		0.47	0.0	10	19	10	1	w.	J. W. Harkness.
Hemlock Lake	Livingston	900	12	62.3	− 3.9	85	22	34	4	34	1.85	− 1.68	0.53	0.0	5	15	7	8	nw.	D. H. Westbury.
Hunt	....do	1,321	11	64.4	− 2.1	92	22	32	4	33	1.19	− 2.66	0.54	0.0	7	12	11	7	nw.	W. S. Barrager.
Ithaca	Tompkins	928	32	63.8	− 2.4	91	22	38	4	34	1.14	− 2.74	0.55	0.0	9	11	7	12	nw.	U. S. Weather Bureau.
Keene Valley	Essex	1,000	12	61.0	− 1.6	88	22	28	4	39	2.08	− 1.67	0.34	0.0	14	15	6	9	s.	E. R. Wells.
King Ferry	Cayuga		10								0.98	− 2.89	0.41	0.0	7	19	4	7	nw.	Lucius A. Goodyear.
Lake George	Warren	350	13	64.2	− 0.2	90	22	36	5	36	3.20	− 0.99	0.95	0.0	11	10	13	7	ne.	Charles Forsell.
Lake Placid Club	Essex	1,864	2	55.5		79	16	26	4	28	3.17		1.60	0.0	14	14	14	2	w.	Henry van Hoevenberg.
Le Roy	Genesee	920	20	63.6	− 2.9	87	22	37	4	29	1.48	− 1.92	0.69	0.0	9	13	4	13	w.	F. W. Ball.
Lockport	Niagara	650	23	63.2	− 3.3	88	22	36	4	29	1.13	− 1.46	0.43	0.0	9	18	3	9	sw.	J. E. Wakeman.
Lowville	Lewis	900	43			86	16				1.73	− 1.87	1.18	0.0					w.	Charles J. Rice.
Lyndonville	Orleans		14								1.17	− 1.25	0.52	0.0	3	22	6	2	sw.	Milton St. John.
Moira	Franklin	200	10	62.6	− 1.8	85	22	30	4	40	3.60	− 0.25	1.72	0.0	11	16	9	5	w.	C. E. McBride.
Nehasane	Hamilton	1,750	2	57.8		85	22	26	4	39	4.62		1.64	0.0	11	20	2	8	w.	A. C. Heyburn.
North Lake	Herkimer	1,822	9	59.2	− 1.0	83	15†	29	4	36	3.66	− 1.04	1.25	0.0	7	12	10	8	nw.	H. A. Paull.
Ogdensburg	St. Lawrence	175	26	64.2	− 0.3	85	20	39	5	31	0.98	− 2.57	0.40	0.0	7	14	11	5	w.	State Hospital.
Old Forge	Herkimer	1,733	2	59.2		86	22	29	3	41	3.00		0.72	0.0	12	15	5	10	w.	Stuart W. Nelson.
Oswego	Oswego	335	40	62.0	− 1.8	83	26	40	5	25	1.69	− 1.74	0.89	0.0	9	11	10	9	w.	U. S. Weather Bureau.
Otto	Cattaraugus	1,410	6	62.6		86	25	35	4	33	1.00		0.29	0.0	6	14	8	8	.....	William Winke.
Palermo	Oswego	460	51								1.59	− 1.67	1.20	0.0	6	22	3	5	sw.	E. B. Bartlett.
Perry City	Schuyler	1,038	30	62.9	− 2.2	88	22	32	4	39	1.34	− 2.73	0.42	0.0	8	14	6	10	nw.	W. H. Jeffers.
Philadelphia	Jefferson	485	4	62.0		83	16	32	4	30	1.89		0.47	0.0	10	8	16	6	w.	E. D. Babcock
Plattsburg	Clinton	170	60			92	20	35	4	31	2.96	− 0.16	0.82	0.0	10					T. P. Davison.
Potsdam	St. Lawrence	300	34	62.4	− 1.9	83	28†	41	3†	41	1.14	− 2.58	0.74	0.0	6	20	3	7	sw.	Lloyd W. Weed.
Raquette Lake	Hamilton		2	59.2		81	22	29	4	35	3.30		1.29	0.0	10	15	4	11	nw.	R. J. Dunning.
Rochester	Monroe	523	81	64.6	− 1.5	89	22	43	1	31	1.32	− 1.81	0.57	0.0	7	12	6	12	w.	U. S. Weather Bureau.
Romulus	Seneca	719	18	64.2	− 2.9	89	22	37	4	29	1.02	− 2.96	0.31	0.0	6	16	6	8	.....	John H. Coryell.
Shortsville	Ontario	740	11	63.2	− 2.3	86	22	35	4	28	1.52	− 2.30	0.55	0.0	9	14	11	5	w.	C. H. Latting.
Skaneateles	Onondaga		15								1.79	− 2.47	0.67	0.0	10					Edward Conron.
Syracuse	....do	597	8	63.8	− 3.1	87	22	37	4	24	2.24	− 1.65	1.23	0.0	10	9	10	11	nw.	U. S. Weather Bureau.
Ticonderoga	Essex	344	12	63.8	− 1.4	90	30	34	5	32	2.33	− 1.35	0.70	0.0	10	15	9	6	s.	Eva M. De Lano.
Trudeau	....do	1,620	17																	Daniel Smith.
Tupper Lake	Franklin	1,552	10																	Aaron W. Maddox.
Volusia	Chatauqua	1,167	11	63.8	+ 0.1	92	26	36	4	35	2.17	− 1.25	0.67	0.0	6	16	10	4	w.	Benjamin Breads.
Watertown	Jefferson	737	18	62.8	− 3.6	84	16	33	4	37	2.60	− 0.87	0.60	0.0	10	15	9	6	s.	L. L. Allen.
Wedgewood	Schuyler	1,430	21	62.8	− 3.1	88	22	34	4	30	1.31	− 2.83	0.44	0.0	10	16	7	7	nw.	Orlando F. Corwin.
Westfield	Chatauqua	837	14	62.0	− 3.6	85	24	38	4	25	2.70	− 0.95	0.81	0.0	7					John R. Rogers.
Youngstown	Niagara		8								0.71		0.40	0.0	6	10	18	2	.....	B. V. Brookins.
Vermont.																				
Burlington	Chittendon	404	3	61.8	− 2.0	85	22	34	5	30	3.10	− 0.16	1.29	0.0	12	2	17	11	s.	U. S. Weather Bureau.
Cornwall	Addison	507	17	62.4[a]	− 4.7	85	22	34	4†	30	3.54	+ 0.21	1.20	0.0	12	10[a]	5[a]	14[a]	n.	C. H. Lane.
Enosburg Falls	Franklin	601	19	61.8	− 3.4	85	16	29	4	37	3.68	− 0.87	0.90	0.0	16	10	10	10	n.	L. Howe Pomeroy.
Northfield	Washington	876	24	58.9	− 3.8	85	22	28	5	35	3.18	− 0.07	0.73	0.0	15	3	14	13	s.	U. S. Weather Bureau.
Rutland	Rutland																			H. L. Hindley.
Wells	....do	750	19	61.4	− 4.3	84	21	34	4	28	2.75	− 0.76	0.68	0.0	7	9	13	8	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 June, 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		T.	T.	.02	.02										.04	T.									T.	.03						0.11
Floodwood	...do			.07		.03																			.01	.02							0.13
Mount Iron	...do			.09	.13	.13										T.	T.																0.35
Stephens Mine	...do		T.	.02	.14							.01											T.			.23	.05						0.45
Two Harbors	...do				.50	T.											.10							.26			.70						1.56
Wisconsin.																																	
Appleton	Fox		.10			.27	.27												.03					.02			.09						0.78
Ashland	Lake				T.	.11											T.									T.	.40						0.51
Cecil	Fox		.70				.15																										0.85
Chilton	...do		.04		T.	.16	.45												.42								T.	.46					1.53
Crandon	...do					.30												.03	.05							.01							0.39
Florence	Menominee					.77													.30								.10						1.17
Fond du Lac	Fox					.22	.28												T.									.36					0.86
Grand River Locks	...do					.22	.14																					.47					0.83
Green Bay	Lake		.26		.03	.17	.32												.01								.15						0.94
Herbster	...do																																
Iron River	...do		.04		.02	.05										T.										1.60	.19						1.90
Kewaunee	...do		.33			.43	.11												.30					.08			.20						1.45
Manitowoc	...do		.04		.06	.05	.36												.08								.55						1.14
Menasha	Fox		T.			.03	.19												.06								T.						0.28
Menominee Falls	Lake		.27		.15	.08	.06												.08									1.42					2.06
Milwaukee	...do		.41		.14	.06	.11								.01				.02								.01	.25					1.01
New London	Fox		T.			.25	.45												.30					.16			T.						1.16
Oconto	Lake	.54	.05		.20	.59												T.															1.47
Oshkosh	Fox		T.				.65											.30										.45					1.40
Pine River	...do		T.		*	.30	.91												T.					T.			T.						1.21
Plum Island	Lake	.12	.04			.68	.02																	T.				T.					0.86
Port Washington	...do		.10			.42	.12																					.42					1.06
Racine	...do		.52		T.	.27	.09												T.									.02					0.90
Sheboygan	...do		.04		.02	.30	.36												.30	.07					.09			.65					1.83
Sturgeon Bay	...do	.03	.70	.01	T.	.59	.02												T.									.02					1.37
Superior‖	...do					.05	.06										.03										.19	T.					0.33
Waupaca	Fox		.02		.16		.63												.08					T.									0.89
Illinois.																																	
Chicago	Lake Michigan		.41		.41		.05												.04								T.						0.91
Indiana.																																	
Auburn‖	Maumee	.03		.16		.23	T.																										0.42
Berne	...do		.32							.02		.01			T.	.13			T.	T.		.07						.54	.01				1.10
Elkhart‖	St. Joseph	T.	.31			.70	.26								T.					.05								T.					1.32
Fort Wayne	Maumee		.17			.01						T.			.02	.07				T.								.01					0.28
Hammond	Lake Michigan		.42	.12		.52	.31																		T.								1.37
Howe‖	St. Joseph			.40		.55	.25						.33							.08									.20				1.81
South Bend‖	...do	.09		.43		.62	.19	.02								.05				T.								.02					1.42
Whiting	Lake Michigan		.40				.06																										0.46
Michigan—Upper Peninsula.																																	
Baraga	Lake																			.50							.50						1.00
Bergland	Ontonagon		T.		T.	.50											.10		.30					T.		.13	.54						1.57
Blaney	Manistique					.09	.05																										0.14
Calumet	Lake		.06		T.	.01											.18							.12			T.						0.37
Chatham	...do	.14	.16			1.16	.03										T.	.44						T.			T.						1.93
Deer Park	...do	.25	.60			.40	.30											.20															1.75
Detour	St. Marys																																
Eagle Harbor	Lake	T.	.10		.14	T.	T.		T.								T.																0.24
Escanaba	...do	.03	.02		T.	.45	T.											.26		.27				.01			.02						1.06
Ewen	Ontonagon		.01		T.	.45	T.											*						T.		.29	T.						0.75
Grand Marais	Lake	.20	.10			.20	.10																										0.60
Houghton	...do		.04		.02	.03	T.										.26							.02		.02	T.						0.39
Humboldt	Escanaba					T.																											T.
Iron Mountain	Menominee					.71																											0.71
Iron River	...do		.10			.30													.60					T.			.20						1.20
Ironwood	Lake		T.		T.	.05											.02									.01	.02						0.10
Ishpeming	Escanaba	.10	.10	.05		.30	.10										T.							T.			T.						0.65
Isle Royale	Lake		T.				.40										.80																1.20
Mackinac Island	...do																																
Maple Ridge	...do	.05	.04			1.02	.02											.68															1.81
Marquette	...do	.03	.14		.05	.51	.03										0.6							T.			T.						0.82
Menominee	Menominee		.40			.51													T.								T.						0.91
Newberry	Tequamenon											.01					.55																0.56
Powers	Lake																										T.						T.
St. Ignace	...do	.42					.22											.21															0.85
Sault Saint Marie	St. Marys	.25	T.			.24	.09					T.			T.		.09	.03															0.70
Thomaston	Lake				T.												.05								T.								0.05
Victoria	Ontonagon		.01		.04	.23	T.									.06			T.					T.		.18	.07						0.59
Watersmeet	...do				T.	.29	.04										.01		.08														0.42
Wetmore	Lake	.35	.20			.50																											1.05
Whitefish Point	...do	.22	.07			.49	.19											.33															1.30
Michigan—Lower Peninsula.																																	
Adrian	Raisin	.03	.69			.40	.27									.02				.20									.04				1.65
Agricultural College	Grand	.18	.55	T.		.13	.24					T.				T.								.76				.09					1.95
Allegan	Kalamazoo																																
Alma	Saginaw	.30	.28	.03		.14	.09					T.	.10											.60				T.					1.54
Alpena	Lake	.05	T.		T.	.53	.02					.01	.13					.18										T.					0.92
Ann Arbor	Huron	.09	.87	.03		.32	.09					.03									T.			.03				.05					1.51
Arbela	Saginaw	.38	.58			.36	.08						.09															.16					1.65
Battle Creek	Kalamazoo	.05	.36	T.		.05	.15					T.			.37													.05					1.03
Bay City	Saginaw	.40	.30	.40		.50	.10						.90															.10					2.70
Bensonia	Betsie	.11	.08			.13																					.08						0.40
Berlin	Clinton	.35	.60			.68						.17	.01															.01					1.82
Big Rapids	Muskegon	.13	.25			.26	.12					.15																.31					1.22
Bloomingdale	Lake	.02	.62	T.		T.	.31					.33			.05										.05			T.					1.38
Cadillac	Manistee	.16	.05			.30					T.	.15															.40						1.06
Cassopolis	St. Joseph		.65	.25								.01								.45													1.36
Charlevoix	Lake	.14								.53								.56										.04					1.27
Charlotte	Kalamazoo	.10	.61			.07	.32					.02	T.		T.									T.	.09			.04					1.25
Cheboygan	Cheboygan	.36				.15	.18					T.						.40										T.					1.09
Clinton	Raisin	T.	.36	.09		.28	.15					T.	T.			.06			T.									T.					0.94
Coldwater	St. Joseph		.55	.08		.33	.10						.02		T.										.52			.05					1.65
Concord	Kalamazoo	.13	1.15			.30	.08								T.	T.								.14				.09					1.39
Croton	Muskegon	.13	.25			.22	.18					.10	.03															.21					1.22
Detroit	Detroit	.31	.69			.21	.05					.10	.07		.01			.01										.02					1.47
Durand	Saginaw	.18	.41	.26		.22	.30	.02				T.	T.		T.			.07							T.			.08					1.54

TABLE 2.—*Daily precipitation for June, 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.
Michigan—Lower Peninsula—Cont'd.																																	
East Tawas	Lake	.40	.05			.20							.25					.35										.25					1.50
Eloise	Rouge	.26	.59	.03		.24	.07					.03	T.					.01						T.				.02					1.25
Flint	Saginaw	.12	.30	.50		.25	.05					.15									.08			.08				.10					1.63
Frankfort	Betsie	.08	.13			.10																			.25			.10					0.66
Ganges	Lake	.03	.74			.16	.19																		.08			.05					1.25
Gaylord	Cheboygan	.11	.02			.17	T.																										0.30
Gladwin	Saginaw	T.	T.			.70													T.						.10								0.80
Grand Haven	Grand	T.	.67		.16	.06	.28					T.												T.	.05			.01					1.23
Grand Rapids	...do	T.	.46			.10	.26					.22												T.				T.					1.04
Grape	Raisin	.17	.32			.09	.25					.10	.01															T.					0.94
Grass Lake	Grand	.10	.90	.10		.27	.10					.04									T.			T.	T.								1.51
Grayling	Au Sable																																
Harbor Beach	Lake	.25	.10			.05	.10					.05	.25					.95										.20					1.95
Harrison	Saginaw																																
Harrisville	Lake	.31				.23	T.					.05						1.91										T.					2.50
Hart	Pentwater		.15			.32																						.15					0.62
Hayes	Pigeon	.89	.35	T.	.10	.05							.52						.56									.22					2.69
Highland	Huron	.15	.95			.26	.23																	T.				T.					1.59
Hillsdale	Saint Joseph	.03	.46	.03		.32	.12								T.					T.				T.	T.			.10					1.06
Holland	Lake	.02	.58			.04	.13					.02																T.					0.79
Howell	Saginaw	1.60				.25	.50						.05		T.									T.									2.40
Ivan	Manistee	.09				.28						.34							.04									.04					0.79
Jackson	Grand	.06	1.20	.13		.28	.08								T.									.21	.02			.09					2.07
Jeddo	St. Clair	.25	.14	.07		.26	.06					.12	.05					.19										.12					1.26
Kalamazoo	Kalamazoo		.72			.05						.62																T.					1.39
Lansing	Grand	.17	.52			.12	.20					T.												.42				.05					1.48
Lapeer	Saginaw	.35	.35			.28	.03						.22						T.		.94							.10					2.27
Ludington	Pere Marquette		.21				.45																					.42					1.08
Luther	Manistee	.05	.08			.35	.05					.22																.39					1.14
Mackinaw	Lake	.01					.30					T.						.31										T.					0.62
Mancelona	...do	.05	.01			.10	T.					.01						.10											T.				0.27
Manistee	Manistee	.14				.24																						.35					0.73
Midland	Saginaw	.02	.10			.02	.01						.10											T.				T.					0.25
Montague	White		.31			.22	.35																										0.88
Morenci	Maumee	.04	.67			.20	.11													.04								.62					1.68
Mount Clemens	Clinton	.15	.10	.05		.35	.15					.10				T.			T.									T.					0.90
Mount Pleasant	Saginaw	.15	.27									.10																.16					0.68
Muskegon	Muskegon		.65			.20	T.																		T.			T.					0.85
Old Mission	Lake	.41				.29						.08																					0.78
Olivet	Kalamazoo	.22	.73			.08	.18					.04	.01		.30									.80				.74					3.10
Omer	Lake		.70																T.														0.70
Onaway	Cheboygan																																
Ovid	Grand	.07	.28	.78		.21	T.	.22					.05			.11	.11								.65				.06				2.54
Owosso	Saginaw	.04	.06	.05	.11	.18	.16																	.10				.10					0.80
Petoskey	Lake																																
Plymouth	Rouge	.20	.66	.20		.80	.10														.35												2.31
Pontiac	Clinton	.25	.82	.10		.30	.16					.08	.02						.04		T.							T.					1.77
Port Austin	Lake																																
Port Huron	St. Clair	.20	.24	.01		.22	.13					.23	.01			T.		.03	.01									.02					1.10
Reed City	Muskegon	.20				.20						.15																					0.55
Roscommon	Au Sable		.15			.30													.30														0.75
Saginaw	Saginaw	.40	.20	.10		.34	T.					T.	.10						T.					.15				.05					1.34
Saginaw, W. S.	...do	.45	.23	.12		.39	.02					T.	.26						.08					.18				.02					1.75
St. James	Lake	.25				.10												.51															0.86
St. Johns	Grand																																
St. Joseph	St. Joseph	T.	.38			.14	.04													.22													0.78
Sandusky	Lake	.22	.16			.29						.06	.08					.85										.20					1.86
Saranac	Grand	.29	.38			.15	.35																	T.									1.17
South Haven	Lake	.40					.20													.30					.30								1.20
Stanton	Grand																																
Thornville	Saginaw	.60	.55	.10		.64	1.00					.10	.15								.15							.20					3.49
Traverse City	Lake	.25																									.25						0.50
Vassar	Saginaw	.11	.26			T.																						T.					0.37
Wasepi	St. Joseph		.25			.50	.16					.15							.03									.05					1.14
Webberville	Grand	.22	.80			.22	.30					T.	T.		.24									.08				.09					1.95
West Branch	Lake		T.	.26	.09														.21														0.56
Woodlawn	Au Sable	.05				.38	.10		.02				.08					1.12		.75													2.50
Ypsilanti	Lake	.13	.42	.32		.35	.18					T.												T.	.01			.09					1.50
Ohio.																																	
Akron‖	Lake																			.02								T.	.44				
Benton Ridge	Maumee	.08	.30	.12	.01	T.	T.			T.		.12								.13								.09	.18				1.03
Bowling Green	Lake	.07	.43				.30					.14							T.									1.25					2.19
Bucyrus	Sandusky	.15	.20	.50		.02		.25			T.	1.25	.02							T.					T.			T.	.30				2.69
Cleveland (1)	Lake	.30	.22	.01	T.	.05	.54				.18	.59			T.				.11									T.	.01				2.01
Cleveland (2)	...do	.25	.39		.03		.52				.05	.69							.05									T.					1.98
Defiance	Maumee	.02	.02	.32		.06	T.	.20					T.			.04	.08				.65							T.	1.18				2.57
Findlay‖	...do	.13	.07	.55				.06			T.	.13	.05															T.	.34				1.33
Fremont	Sandusky	.12	.63		T.	T.	.08					.56							.08									.72					2.19
Hedges	Maumee		.25									.21								.46								.70					1.62
Hillhouse	Lake	.40	.20	.19		.25	.54	T.			T.	.76	.04						.15									T.	.04				2.57
Hiram	...do	.30	.16	.20		T.	.04					.84			T.				.08										.05				1.67
Hudson	...do	.40	.22	.25			.05				.10	.95																.04	.09				2.10
Lima	Maumee		.35							.10	T.	.17								.40								.78	.73				2.53
Medina	Lake	.23	.24	.06		T.	.14				.21	.70			T.		.10	T.										T.	.23				1.91
Montpelier	Maumee	T.	.44		.28		.10				T.					T.									T.			.60					1.42
Napoleon	...do	.06	.30	.22	T.	.05	.20					T.																1.42					2.25
New Bremen	...do		.33							.12	.16	.16			.93				T.	T.	.10							.64					2.44
North Royalton	Lake	.52	.25	.23		.02	.05				.27	1.02																					2.63
Norwalk	...do	.17	.22	.49				.06				.57	.11																.49				2.11
Oberlin	...do	.26	.36	.61	T.	.06	.03					.65			T.		.03											.20	.09		T.		1.69
Ottawa	Maumee	.01	.35	.05		T.	.07				T.	.12					.03			.08	.01							.53					1.25
Rome	Lake																																
Sandusky	...do	.17	.42		T.	T.	.41				.23	.34						T.	T.					T.				.17					1.74
Tiffin	Sandusky	.13	.44	.08	T.	T.	T.			T.	.12	.60			T.	.24			.03									.75					2.39
Toledo (1)	Maumee	.10	.39		T.	.03	.17				T.	.11	.05						.02		T.			T.				.10					0.97
Toledo (2)	...do	.11	.27	.05	.01	.03	.43					.07	.14						.04		.01				T.			.10	.01				1.27
Upper Sandusky	Sandusky		.45	.15	T.		T.			.02	.45	.35			T.				T.		.15	.05						.10	.23				1.95
Vickery	Lake	.16	.46	.08		.02	.30				.03	.80																.64	.02				2.51
Wauseon	Maumee	.02	.02	.77		.17	T.	.06				.01	.02				.03			T.	.06	T.						.02	.51				1.69
Wellington	Lake	.21	.15	.21	T.	.02	.08				.22	.80								.03								.55	.20				2.47
Willoughby‖	...do	.13	.35	.33				.45					.62	.14			.01	.52										.01					2.56
Pennsylvania.																																	
Erie	Lake	.28	.13	.14		.38	.21	T.			T.	.41			T.												.46	T.					2.01

TABLE 2.—*Daily precipitation for June, 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	.11	.19	.07		.41	.10	.11	.02			.27	.13				.03	.08	.21	.10									.63				2.46
Angelica	Genesee	.03	.02	.11		.04	.07	.04								.09	.02											T.					0.42
Appleton	Lake	T.		T.		.38	.05	T.			.29							.10										.06	.04				0.92
Auburn	Oswego	T.				.58	.35	.20				.50																.18					1.81
Avon	Genesee	.07		.04		1.12	.07	.03				.47							.40														2.20
Benson Mines	St. Lawrence																																
Blue Mountain Lake	Raquette	.03					.67	.73	T.	T.								.25	.97									.09					2.74
Brockport	Lake			.01		.51	.03				.03	.38				.09			.45										.15				1.65
Buffalo	Lake	.02	.06	.07		.33	.06	.01	T.	T.	T.	.44	T.					T.										.06					1.05
Canton	St. Lawrence		.17	.05		.25	.07	.38	T.			.26	.06					T.	.71					.03			T.	T.			T.		1.98
Cape Vincent	...do	.02	T.			.38	.15	.20	.03			.42							.10										.04				1.34
Carvers Falls	Lake	.10	.24				.90			.24		.26	.36																				2.10
Chasy	...do	T.	.50	T.		T.	.42	1.25	.10	.05		.58	.03															.65					3.58
Dannemora	...do	.05	.16	T.		*	.59	.66	.15	.16	.02	.29	.04					.14										*	.17				2.43
Elba	Lake	T.		T.		.50	.05	.10			.40	T.	T.					T.	T.										.20				1.25
Fayetteville	Oswego	.04	.04			.74	.14	.48	.03		T.	.50	.02				.01	T.										T.	T.				2.00
Gabriels	Lake	.02	.07	.04		.12	.30	.67	.12	.08	.04	.24	.13					T.	.15	.07									.31				2.36
Harkness	...do	.03	.06			.13	.47	.43	.28			.33	.06					T.	.32									.07					2.18
Hemlock Lake	Genesee	.22				.53	.40						.40					.30										T.					1.85
Hunt	...do	.03		.02		.25	.12	.11				.54						.12															1.19
Ithaca	Oswego	.01	.01			.09	.22	.11				.55	T.				.13	T.	.01									.01					1.14
Keene Valley	Au Sable			.05		.34	.28	.31	.16	.06	.03	.32	.11			.19		.04	.13					T.				.02	.04				2.08
King Ferry	Oswego	.02				.13	.28	.05				.41					.03											.06					0.98
Lake George	Lake	.07	T.			.24	.95	.52				.32	.69			.11	.07	.09	.11									.03					3.20
Lake Placid Club	Au Sable, W. Br.		.08			.12	.10	1.60	.36	.10	.08	.05	.06			.16		.05	.09							.02		T.	.30				3.17
Le Roy	Genesee	.02		.09		.69	.05	.03				.40						.04	.07									.09					1.48
Lockport	Lake	T.		.08		.43	.09	.01		.01	.01	.37						T.										.06	.07				1.13
Lowville	...do											.25					T.	1.18	.30														1.73
Lyndonville	...do					.52						.30						.35															1.17
Moira	St. Lawrence		.05	.06		.10	.14	.30	.09			T.	.13					1.72	.42					.02				T.	.57				3.60
Nehasane	Lake		.06			.41	.25	.75	.18			.30	.06					1.64	.80	.05									.06				4.62
North Lake	...do	.15				.68	.27	.78				.41	.12						1.25														3.66
Ogdensburg	St. Lawrence	T.	.10	.06		T.	.21	.40	.02			.10	.09						T.			T.						T.					0.98
Old Forge	Lake	.01	.06			.53	.20	.72	.19			.45	.09					.04	.24	.02								.45					3.00
Oswego	...do	.03	T.	T.		.89	.12	.03		.01		.40	T.			T.	T.		.01									.19	.01				1.69
Otto	...do	.28	.06	.29		.13		.06				.18															T.						1.00
Palermo	Lake	.05				1.20		.10				.16	T.						.03									.05					1.59
Perry City	...do	.03	T.	T.		.03	.08	.42		T.		.40					.07		.30										.01				1.34
Philadelphia	St. Lawrence		.02			.47	.17	.12	.07		T.	.33	.41					.04	.03										.23				1.89
Plattsburg	Lake	.10	.60	.03		.10	.60	.65		.01	.04			.01															.82				2.96
Potsdam	St. Lawrence		.18	.06				.74	.06														.09	.01									1.14
Raquette Lake	Raquette			.08		*	.55	.72	.11			.41	.06	.04				.56	.73	.04													3.30
Rochester	Genesee	T.		.02		.57	.09	T.	T.			.37						.07	.10									.10					1.32
Romulus	Oswego	.08	T.			.31	.14	.23				.23					T.		.03														1.02
Shortsville	...do	.02		.03		.55	.10	.18		T.		.39					T.	.07	.08									T.	.10				1.52
Skaneateles	...do	.06	.02			.67	.25	.20	T.	T.		.40	.07				.03	T.	T.								.03	.66					1.79
Syracuse	...do	.02	T.			1.23	.39	.03		T.		.51	.01				.01	.01	T.									.01	.02				2.24
Ticonderoga	Lake	.02	T.			*	.70	.55	.05		.01	.24	.20			.01		.05	.50									T.					2.33
Trudeau	...do																																
Tupper Lake	St. Lawrence																																
Volusia	Lake	.25	.25	.40		.44	.16	T.				.67						T.										T.					2.17
Watertown	...do	.02	T.			.60	.12	.20	.12			.41	.03				.36		.43										.31				2.60
Wedgewood	Oswego	.04	T.	.01		.06	.04	.29				.44					.20	.07	.13									T.	.03				1.31
Westfield	Lake	.81	.09	.37		.47	.21	.29			.46						T.																2.70
Youngstown	...do					.15	.03		.01			.40																.10	.02				0.71
Vermont.																																	
Burlington	Lake	.01	.09	.05		.22	.26	.84	.07	T.		.21	.04				.02	T.	T.				T.	T.		T.	T.	.94	.35				3.10
Cornwall	...do	.25	.10	T.		.60	.40	1.20	.10	.04		.20	.05					.25					T.					.10	.25				3.54
Enosburg Falls	...do	.30	.24	.16	T.		.24	.90	.14		.10	.11	.11	T.		.01		T.	.25	.01				.78	T.	.01	T.	.02	.30				3.68
Northfield	...do	.01				.40	.33	.56	.12	.02		.26	.07			.50	.07	.13	T.				.02	.16	T.			.45	.08				3.18
Rutland	...do																																
Wells	...do	.41	T.				.66	.68	.05		T.	.37	.17					.41	T.					T.				T.	T.				2.75

TABLE 3.—*Maximum and minimum temperatures at selected stations, June, 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	61	42	61	38	68	41	69	41	70	46	63	43	47	36	60	30	56	40	41	38	41	37	47	39	53	39	42	35
2	52	38	57	34	50	40	50	42	55	43	60	36	43	36	42	37	43	37	43	36	51	40	52	41	55	35	44	35
3	42	37	61	32	56	42	53	42	51	43	62	40	53	37	60	27	47	34	42	35	55	35	51	41	54	39	63	38
4	52	35	67	40	62	44	52	43	59	47	67	46	53	39	61	41	58	39	57	36	59	39	50	39	64	44	67	41
5	60	37	58	44	55	45	65	46	68	51	70	52	49	43	60	38	53	41	48	40	48	44	46	42	63	49	58	42
6	61	39	62	40	55	44	54	44	63	49	72	40	61	42	61	44	59	43	61	39	53	44	56	44	59	40	51	40
7	66	48	74	40	73	46	65	48	62	48	74	41	68	49	72	37	70	46	60	50	63	40	71	44	73	41	68	40
8	65	48	75	36	69	48	63	51	63	55	78	42	68	46	77	34	73	45	65	44	70	44	69	44	75	40	75	41
9	67	44	76	38	73	47	65	51	65	56	69	50	72	47	77	45	73	44	67	45	71	41	70	45	73	50	79	45
10	74	50	75	39	74	48	68	52	62	55	66	48	74	50	73	32	72	44	64	44	72	45	75	47	73	48	80	45
11	73	47	75	32	75	49	72	52	69	54	71	55	72	48	74	30	73	42	63	47	72	42	66	50	70	50	75	48
12	82	48	81	38	78	53	66	50	75	53	80	41	70	50	82	32	81	46	78	47	67	47	76	52	75	49	75	51
13	86	62	82	51	88	55	78	54	76	61	83	51	78	55	.....	.....	85	65	85	65	74	43	88	53	84	52	85	52
14	90	66	88	64	89	61	84	66	81	66	86	52	80	58	.....	.....	85	64	84	61	80	48	82	54	80	55	.....	50
15	87	63	89	52	88	61	86	68	82	69	89	52	81	56	.....	.....	85	58	84	59	84	52	77	61	87	53	90	59
16	88	64	89	55	89	62	88	68	88	72	91	54	75	62	.....	.....	86	59	87	63	87	50	78	57	86	58	87	65
17	81	55	94	62	92	67	89	68	91	70	93	56	80	61	.....	.....	86	60	78	58	81	58	84	60	78	59	87	63
18	83	49	89	59	92	66	90	64	90	72	95	65	72	62	.....	.....	72	58	66	53	80	53	78	63	91	69	94	65
19	88	61	82	52	90	64	89	66	88	70	92	62	81	62	.....	.....	78	57	71	53	82	55	72	60	91	59	92	61
20	83	61	90	59	85	64	79	66	78	67	94	60	84	63	90	48	85	62	75	59	77	53	81	60	91	60	88	60
21	90	60	91	53	84	60	81	67	78	64	92	60	79	60	93	61	95	61	93	71	87	52	78	57	89	65	88	62
22	94	64	92	54	94	64	83	66	84	70	92	62	82	62	93	52	93	64	86	68	87	56	94	62	90	62	93	63
23	72	55	89	60	86	71	92	70	89	75	98	62	81	62	89	63	75	59	75	54	83	56	77	62	96	63	95	67
24	67	54	87	52	85	65	78	64	77	66	90	65	74	60	91	50	74	56	71	50	79	56	71	55	83	66	80	59
25	86	57	91	59	87	59	77	61	74	66	88	56	73	62	90	60	85	59	90	64	86	53	72	50	83	53	88	50
26	83	65	82	57	89	60	76	62	79	67	96	51	76	63	77	52	78	65	77	63	82	57	83	58	88	53	.....	.....
27	94	61	86	57	88	68	82	65	77	70	82	69	84	63	87	50	85	62	73	60	73	53	83	63	84	64	.....	.....
28	97	61	93	65	90	62	78	66	78	69	89	58	84	57	93	51	91	59	91	58	85	50	72	57	86	57	.....	.....
29	96	73	96	61	98	70	96	72	91	70	90	56	91	71	95	55	95	71	89	67	80	61	85	61	90	58	.....	.....
30	96	69	95	62	100	70	93	74	88	78	98	58	94	68	95	69	94	73	91	77	83	57	98	63	96	60	.....	.....
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	77.2	53.8	80.9	49.5	80.1	56.5	75.4	58.3	75.0	61.4	82.3	52.8	72.6	54.3	78.0[8]	45.1[8]	76.2	53.8	71.8	53.5	73.1	48.7	72.7	52.8	79.0	53.0	76.8[c]	51.3[c]

Date.	Michigan, Lower Peninsula. Detroit.		Muskegon.		Saginaw, W. S.		Ohio. Cleveland.		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	47	39	53	40	46	38	46	41	56	41	50	41	52	41	47	42	48	43	55	44	49	43	51	44	59	48	56	43
2	55	44	47	39	50	39	56	43	62	36	62	42	57	40	54	46	52	44	57	44	60	45	59	45	58	46	58	45
3	58	44	55	42	59	43	53	45	58	42	55	46	56	45	56	47	57	44	56	39	59	46	56	45	56	39	58	41
4	62	40	65	46	66	38	61	45	65	48	57	44	58	46	57	45	62	41	59	32	56	43	55	37	54	34	55	32
5	61	49	60	41	56	45	62	53	68	47	62	53	65	51	59	50	58	45	63	33	55	44	61	40	64	34	58	28
6	59	43	54	42	59	45	61	50	70	41	67	47	67	49	57	51	55	49	62	48	64	49	67	47	62	45	56	44
7	71	45	66	45	73	42	61	50	72	43	67	51	71	48	58	49	56	44	55	48	58	47	57	47	58	49	58	46
8	73	53	69	41	76	42	67	49	74	44	71	49	75	56	67	50	62	51	68	45	71	47	67	48	65	47	63	46
9	70	54	75	50	73	48	65	54	70	52	62	55	67	55	64	51	70	53	74	48	70	51	71	50	73	50	70	41
10	69	51	76	49	75	48	62	53	63	50	59	56	64	51	65	54	68	52	70	47	67	56	66	54	65	52	61	49
11	59	54	62	50	67	52	57	52	65	40*	57	53	60	53	66	53	64	54	63	50	61	52	63	51	62	50	57	49
12	70	53	72	50	76	52	67	52	70	43	72	49	74	49	62	55	57	54	65	55	65	57	67	58	61	53	60	51
13	79	56	78	51	86	51	76	55	77	48	75	55	80	57	72	58	62	55	73	54	78	56	76	57	77	57	77	56
14	83	62	76	50	88	58	75	59	82	55	79	61	82	62	74	59	68	58	80	55	82	58	80	65	81	56	80	52
15	83	65	76	53	86	57	76	60	84	54	79	61	87	63	76	61	74	58	80	61	85	63	83	62	77	58	84	53
16	83	67	78	68	91	59	77	60	85	58	80	62	88	65	75	60	79	59	82	56	75	60	74	59	77	58	72	52
17	87	66	81	55	89	61	83	62	87	57	88	63	89	65	79	61	74	63	81	63	82	63	78	61	75	60	73	58
18	91	68	84	60	89	66	80	69	90	63	90	69	91	69	77	68	78	60	77	61	77	63	76	62	74	60	72	57
19	81	64	83	55	92	63	74	65	89	66	80	67	88	67	76	61	81	61	79	57	82	60	78	60	74	58	76	52
20	86	68	84	65	87	62	80	63	90	60	85	66	89	66	80	62	80	63	85	56	85	61	83	60	84	55	82	47
21	86	65	85	64	83	63	78	67	92	62	82	69	85	67	81	66	82	66	83	62	82	64	80	64	82	62	81	56
22	89	68	88	65	93	60	80	62	90	65	82	69	88	67	82	65	78	66	84	63	89	64	87	67	85	64	85	56
23	92	69	85	65	96	64	84	64	93	61	89	66	93	73	83	66	82	68	74	58	79	66	78	62	72	55	72	50
24	80	62	86	66	77	60	74	64	87	69	77	67	76	66	73	63	74	61	74	53	74	61	75	57	72	52	69	48
25	78	56	80	63	85	50	74	60	85	55	72	65	75	59	73	60	81	58	80	55	78	54	78	54	75	51	72	44
26	85	61	82	54	88	71	78	62	90	74	80	65	84	62	80	65	87	62	80	55	80	58	83	61	81	55	79	45
27	73	63	81	66	79	64	74	63	77	67	75	64	77	63	76	65	77	66	81	64	83	64	81	63	76	64	78	64
28	82	58	79	59	84	54	75	60	80	60	82	62	85	61	74	63	70	60	74	57	80	62	75	61	75	59	73	53
29	84	66	82	58	92	61	77	61	81	70	80	65	83	67	76	60	74	63	80	49	81	58	79	57	75	57	71	56
30	95	67	90	64	98	61	83	61	90	61	86	69	95	67	80	63	74	66	82	53	82	62	81	61	78	54	76	48
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	75.7	57.3	74.4	53.9	78.6	53.9	70.5	56.8	78.1	54.4	73.4	58.4	76.7	58.3	70.0	57.3	69.5	56.2	72.5	52.2	73.3	55.9	72.2	55.3	70.9	52.7	69.4	48.6