moisture was received in the more eastern States from northern Virginia northward. Warm weather continued in the spring-wheat region until the last week in the month, and rust developed rapidly, the late crop being seriously injured in many portions of the belt. Cotton made, as a rule, unfavorable progress during the latter part of the month, it being too dry in the western portion of the belt and too cloudy and wet in most of the central and eastern portions, though more favorable in the northeast. Exceptionally favorable weather continued for ranges and stock in the northwestern grazing districts, especially in Montana.

CLIMATOLOGICAL TABLES.[1]

CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

Condensed climatological summary of temperature and precipitation by sections, July, 1923.

Section.	Temperature.								Precipitation.					
	Section average.	Departure from the normal.	Monthly extremes.						Section average.	Departure from the normal.	Greatest monthly.		Least monthly.	
			Station.	Highest.	Date.	Station.	Lowest.	Date.			Station.	Amount.	Station.	Amount.
	°F.	°F.		°F.			°F.		In.	In.		In.		In.
Alabama	78.5	−1.4	Madison	101	12	Maple Grove	48	1	5.23	−0.59	Marion	11.04	Evergreen	1.28
Arizona	79.9	−0.2	2 stations	116	[2] 1	Henry's Camp	38	7	2.92	+0.28	San Rafael Ranch	8.41	Supai	T.
Arkansas	79.9	0.0	Hope	105	24	Rogers	48	1	3.53	−0.39	Little Rock	7.86	Harrison	0.33
California	71.4	−1.8	Greenland Ranch	123	29	Portola	29	18	0.05	−0.03	Campo	1.35	148 stations	0.00
Colorado	67.5	+1.0	Lamar	106	31	Longs Peak	24	20	3.18	+0.86	Silver Lake	11.50	Garnett	0.34
Florida	80.4	−0.7	New Smyrna	100	17	Cottage Hill	60	20	6.97	−0.19	Ocala	12.80	Sand Key	1.10
Georgia	78.8	−1.3	Dublin	105	13	Blue Ridge	48	7	4.40	−1.37	Thomasville	10.59	Newnan	0.52
Hawaii	74.1	+0.1	Waianae	92	22	5 stations	53	[2] 1	5.40	−1.02	Puu Kukui (upper)	32.00	6 stations	0.00
Idaho	69.7	+2.0	Weiser	110	[2] 23	Stanley	26	4	0.93	+0.19	Bogus Creek	2.53	American Falls	0.02
Illinois	77.1	+1.2	Carbondale	107	24	Mount Carroll	47	1	2.15	−1.29	Freeport	7.05	Henry	0.05
Indiana	75.2	−0.1	Veedersburg	100	21	2 stations	41	1	3.51	−0.28	Frankfort	9.46	Terre Haute	0.59
Iowa	76.5	+2.4	Nora Springs	102	22	Little Sioux	47	28	1.75	−2.21	Mount Ayr	5.54	2 stations	0.29
Kansas	78.7	+0.3	Fredonia	111	24	Hoxie	49	29	3.15	−0.31	McFarland	10.12	Beaver	0.14
Kentucky	76.8	+0.1	3 stations	99	[2] 12	Eubank	44	1	3.59	−0.71	Anchorage	7.79	Marion	0.21
Louisiana	80.2	−1.4	Plain Dealing	106	25	Farmerville	67	1	6.98	+0.56	Schriever	15.15	Robeline	1.68
Maryland-Delaware	73.9	−1.3	Boyds, Md	101	[2] 20	Freeland, Md	39	1	4.61	+0.27	Millsboro, Del	8.87	Chesapeake City, Md	1.68
Michigan	68.6	+0.1	3 stations	98	[2] 10	Humboldt	35	4	3.20	+0.25	Ironwood	10.71	Ludington	0.51
Minnesota	72.9	+3.6	International Falls	103	22	Itasca State Park	36	1	2.82	−0.77	Two Harbors	7.56	Winnebago	0.71
Mississippi	79.4	−1.4	Yazoo City	102	25	2 stations	54	1	5.80	+0.55	Pearlington	12.08	University	2.25
Missouri	78.2	+0.7	2 stations	105	24	Clinton	50	[2] 1	3.07	−0.89	Waverly	10.29	Tarkio	0.24
Montana	69.2	+3.5	Knowlton	107	19	Wisdom	25	28	2.34	+0.75	Wheaton	7.42	Pleasant Valley	0.00
Nebraska	76.5	+1.9	Holdrege	104	10	2 stations	45	[2] 1	2.83	−0.59	Bingham	8.61	Stanton	0.36
Nevada	73.9	+1.1	Pahrump	116	28	Rye Patch	24	7	0.42	+0.09	Searchlight	2.52	7 stations	0.00
New England	65.9	−2.6	Norwalk, Conn	99	[2] 20	Chelsea, Vt	31	1	3.14	−0.58	Bennington, Vt	5.68	New Haven, Conn	1.49
New Jersey	71.9	−1.9	Burlington	102	21	Charlotteburg	40	1	3.88	−0.68	Newark	6.28	Woodcliffe Lake	0.93
New Mexico	72.7	+0.8	Orogrande	110	1	Elizabethtown	34	3	2.00	−0.70	Cloudcroft	5.90	Cundiyo	0.05
New York	67.8	−1.8	Scarsdale	101	21	Indian Lake	32	7	2.84	−1.08	Andover	5.33	Lowville	0.58
North Carolina	75.6	−0.5	Sloan	104	21	Mount Mitchell	42	18	5.93	−0.63	Swansboro	14.40	Tryon	1.15
North Dakota	71.2	+3.7	Pembina	103	9	Turtle Lake	35	30	3.14	+0.53	Washburn	6.16	Langdon	0.70
Ohio	72.7	−0.6	Lancaster	100	11	Canfield	41	23	3.57	−0.28	Toboso	11.34	Hamilton	1.21
Oklahoma	83.2	+2.3	Okeene	111	31	Goodwell	55	2	1.10	−1.82	Hurley	5.83	4 stations	T.
Oregon	67.3	+0.9	2 stations	106	13	La Pine	27	31	1.18	+0.59	Welches	3.94	2 stations	0.04
Pennsylvania	71.0	−1.0	Gettysburg	100	[2] 20	West Bingham	32	23	4.24	−0.09	Vandegrift	9.86	Ansonia	0.92
Porto Rico	78.5	−0.3	Lares	97	11	4 stations	58	[2] 3	4.49	−2.16	Maricao	18.50	Santa Rita	1.25
South Carolina	79.0	−0.8	Society Hill	104	5	3 stations	57	[2] 1	4.50	−1.44	Georgetown	8.88	Calhoun Falls	1.15
South Dakota	74.6	+3.6	Dupree	105	18	Lead	40	29	3.45	+0.15	Deadwood	9.30	Ardmore	0.61
Tennessee	77.2	−0.3	2 stations	101	[2] 8	Pinewood	43	1	3.99	−0.68	Charleston	7.82	Pinewood	0.98
Texas	83.5	+0.6	Henrietta	114	[2] 15	Seminole	50	12	1.67	−1.06	Bon Weir	8.90	6 stations	0.00
Utah	72.7	+1.6	2 stations	110	[2] 29	3 stations	37	[2] 1	1.19	+0.23	Mammoth Ranger Station.	3.80	3 stations	T.
Virginia	74.3	−1.1	Lincoln	100	[2] 20	Burkes Garden	44	[2] 3	5.12	+0.11	Mayhurst	11.14	Dale Enterprise	2.49
Washington	67.6	+1.4	Trinidad	109	[2] 22	Paradise Inn	32	[2] 3	1.17	+0.46	Kettle Falls	2.63	Wahluke	0.00
West Virginia	71.7	−1.2	Inwood	100	20	Cheat Bridge	37	1	4.70	+0.12	Elizabeth	9.46	Powellton	2.22
Wisconsin	71.3	+2.0	2 stations	100	[2] 9	Hayward	36	1	3.24	−0.53	High Falls	7.89	La Crosse	0.62
Wyoming	68.3	+2.7	Basin	103	20	Snake River	27	4	2.46	+1.06	Sheridan	6.37	Eden	0.00

[1] For description of tables and charts, see REVIEW.
[2] Other dates also.

TABLE I.—*Climatological data for weather bureau stations, July, 1923.*

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.												Precipitation.			Wind.									
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity.	Total.	Departure from normal.	Days with 0.01, or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet and ice on ground at end of month.
	Ft.	Ft.	Ft.	In.	In.	In.	°F.	°F.	°F.		°F.	°F.		°F.	°F.	°F.	°F.	%	In.	In.		Miles.								0-10	In.	In.
New England.							66.6	−2.2										77	3.01	−0.6										5.8		
Eastport	76	67	85	29.89	29.97	+.04	58.8	−1.6	84	21	68	46	2	50	31	54	51	81	2.69	−0.7	13	5,556	s.	24	ne.	7	8	7	16	6.6	0.0	0.0
Greenville, Me	1,070	6		28.86	30.00		62.0		86	19	72	40	27	52	34				4.34		13						12	5	14		0.0	0.0
Portland, Me	103	82	117	29.89	30.01	+.06	66.2	−1.9	89	20	74	53	27	58	28	59	55	70	2.92	−0.3	9	5,507	s.	25	nw.	6	13	7	11	5.3	0.0	0.0
Concord	288	70	79	29.69	30.00	+.04	66.3	−2.2	92	20	78	45	24	54	37				4.35	+0.6	7	2,751	n.	18	nw.	26	20	5	6	3.9	0.0	0.0
Burlington	404	11	48	29.57	29.99	+.05	65.7	−2.5	88	20	76	46	23	55	35				2.26	−1.5	12	5,152	n.	26	nw.	21	11	9	11	5.4	0.0	0.0
Northfield	876	12	60	29.08	30.02	+.08	62.2	−4.4	87	20	75	40	24	49	42	59	57	83	2.43	−1.3	13	4,005	s.	23	n.	7	7	11	13	6.2	0.0	0.0
Boston	125	115	188	29.86	30.00	+.04	70.0	−1.7	94	20	78	56	24	62	28	62	58	69	3.36	0.0	8	5,639	sw.	25	w.	21	7	11	13	6.6	0.0	0.0
Nantucket	12	14	90	29.99	30.00	+.02	66.5	−1.0	89	21	73	55	31	60	25	62	60	84	3.48	+0.8	7	8,951	sw.	34	ne.	22	8	11	12	6.2	0.0	0.0
Block Island	26	11	46	29.97	30.00	+.03	66.6	−1.8	90	21	73	51	24	60	22	63	61	88	2.02	−1.3	9	8,188	sw.	58	n.	21	15	4	12	4.9	0.0	0.0
Providence	160	215	251	29.83	30.00	+.03	69.0	−4.4	93	20	78	52	24	60	27	62	58	72	3.09	−0.4	10	6,676	w.	40	nw.	16	5	11	15	6.6	0.0	0.0
Hartford	159	122	140	29.83	30.00	+.03	70.4	−1.2	94	20	80	51	24	61	31	63	59	72	4.99	+0.9	10	4,442	s.	28	sw.	24	8	6	17	6.5	0.0	0.0
New Haven	106	74	153	29.89	30.00	+.03	70.6	−1.2	95	21	79	54	24	62	33	64	60	73	1.49	−3.3	9	5,517	s.	28	sw.	9	9	12	10	5.7	0.0	0.0
Middle Atlantic States.							73.6	−1.1										72	4.15	−0.2										5.4		
Albany	97	102	115	29.90	30.00	+.04	70.0	−2.0	94	20	81	52	1	60	32	62	57	66	3.89	0.0	11	4,669	s.	38	s.	24	17	11	3	3.2	0.0	0.0
Binghamton	871	10	84	29.08	30.00	+.03	69.2	−0.7	92	20	81	47	1	57	37				2.26	−1.3	13	3,287	n.	22	sw.	24	8	12	11	5.7	0.0	0.0
New York	314	414	454	29.68	30.00	+.02	72.3	−1.5	94	20	80	57	3	65	29	64	61	72	4.68	+0.1	12	8,577	s.	39	w.	10	6	14	11	6.1	0.0	0.0
Harrisburg	374	94	104	29.62	30.01	+.03	74.2	−0.3	94	21	84	54	1	65	30	64	59	64	3.33	−0.5	9	3,948	nw.	24	ne.	16	7	13	11	6.0	0.0	0.0
Philadelphia	114	123	190	29.89	30.01	+.03	75.2	−1.0	99	21	83	62	3	67	26	65	60	66	3.51	−0.8	12	6,446	s.	25	sw.	24	9	11	11	5.8	0.0	0.0
Reading	325	81	98	29.66	30.00		74.4		94	21	83	54	1	65	28	66	61	68	2.89	−1.3	14	3,621	se.	19	se.	30	5	18	8	5.6	0.0	0.0
Scranton	805	111	119	29.16	30.01	+.03	70.8	−1.0	94	20	82	48	1	60	37	63	58	67	4.72	+0.9	12	3,972	n.	23	nw.	25	10	10	11	5.8	0.0	0.0
Atlantic City	52	37	172	29.94	29.99	+.01	72.2	+0.1	98	21	78	61	9	67	32	67	65	80	5.36	+1.6	13	10,487	s.	35	ne.	23	9	13	9	5.0	0.0	0.0
Cape May	18	13	49	30.01	30.03	+.05	73.7	+0.3	98	21	80	59	1	67	29	68	65	80	4.77	+1.0	11	5,440	se.	24	se.	24	11	5	15	6.0	0.0	0.0
Sandy Hook	22	10	57	29.98	30.00		71.9		94	21	78	58	3	66	25	65	62	77	2.29		12	8,401	s.	38	n.	6	8	14	9	5.2	0.0	0.0
Trenton	190	159	183	29.80	30.00		73.0		96	21	83	56	1	64	32	64	60	69	3.18	−1.6	12	6,839	s.	38	nw.	6	9	10	12	5.9	0.0	0.0
Baltimore	123	100	117	29.86	29.99	+.01	76.7	−0.5	99	21	85	59	1	69	26	67	63	67	2.04	−2.8	12	4,188	s.	26	ne.	16	10	11	10	5.5	0.0	0.0
Washington	112	62	85	29.88	29.99	−.01	75.7	−1.1	96	21	85	54	1	66	33	68	64	71	4.92	+0.3	10	3,175	s.	23	nw.	5	10	12	9	5.5	0.0	0.0
Lynchburg	681	153	188	29.28	30.00	−.01	76.5	−1.0	96	11	87	59	19	66	32	67	63	68	2.52	−1.5	10	4,598	w.	27	se.	30	13	11	7	4.7	0.0	0.0
Norfolk	91	170	205	29.91	30.00	.00	77.0	−1.7	97	21	85	62	10	69	27	70	67	78	4.14	−1.7	13	8,399	e.	45	w.	6	6	17	8	5.9	0.0	0.0
Richmond	144	11	52	29.86	30.00	−.01	76.4	−2.8	97	21	87	60	1	66	33	68	65	75	10.87	+6.4	12	4,701	se.	40	ne.	30	12	11	8	5.3	0.0	0.0
Wytheville	2,304	49	55	27.71	30.02	+.01	69.8	−2.3	88	15	80	52	3	60	30	64	62	82	3.27	−1.2	13	2,987	w.	18	w.	6	12	11	8	4.8	0.0	0.0
South Atlantic States.							78.2	−1.1										78	6.48	+0.4										5.9		
Asheville	2,255	70	84	27.74	30.03	+.01	71.4	−0.3	88	12	81	51	1	62	29	65	62	81	4.54	−0.2	18	3,785	nw.	26	n.	12	8	17	6	4.9	0.0	0.0
Charlotte	779	55	62	29.19	30.00	−.02	78.6	+0.2	98	12	88	62	3	69	27	69	66	71	5.89	+0.4	13	2,744	ne.	25	nw.	6	7	13	11	6.1	0.0	0.0
Hatteras	11	11	50	29.99	30.00	−.01	77.0	−1.2	88	21	82	68	10	72	17	73	71	85	11.69	+5.6	16	10,626	sw.	52	w.	6	7	12	12	5.7	0.0	0.0
Manteo	12	5	42																													
Raleigh	376	103	110	29.61	29.99	−.03	77.4	−1.1	95	12	87	62	19	68	26	69	66	74	6.62	+0.5	15	5,284	sw.	46	ne.	6	5	15	11	6.4	0.0	0.0
Wilmington	78	81	91	29.94	30.02	+.01	78.0	−1.1	92	22	85	64	10	71	22	73	71	84	8.77	+1.8	13	5,999	sw.	32	w.	25	9	13	9	5.5	0.0	0.0
Charleston	48	11	92	29.97	30.02	−.01	80.1	−1.3	96	7	86	67	19	74	20	74	72	79	7.23	0.0	18	7,291	sw.	35	sw.	25	5	11	15	6.8	0.0	0.0
Columbia, S. C	351	41	57	29.64	30.01	−.01	79.8	−1.3	97	13	89	64	1	70	26	71	68	77	2.37	−3.7	12	4,601	s.	42	sw.	25	11	10	10	5.4	0.0	0.0
Due West	711	10	55	29.28	30.04		78.4		96	12	88	62	1	68	28				3.15		8	5,457	nw.	38	nw.	7	6	16	9	6.0	0.0	0.0
Greenville, S. C	1,039	113	122	28.93	30.00		77.2		95	12	86	62	2	68	24	69	65	72	6.21		11	5,014	ne.	35	w.	13	8	15	8	5.2	0.0	0.0
Augusta	180	62	77	29.81	30.00	−.02	80.0	−1.3	99	13	90	63	1	70	27	72	69	73	7.03	+1.7	11	3,288	s.	25	se.	27	8	10	13	6.1	0.0	0.0
Savannah	65	150	194	29.95	30.02	−.01	80.0	−1.5	98	13	88	67	19	72	24	73	71	82	5.47	−0.7	17	7,438	sw.	44	nw.	8	8	9	14	5.9	0.0	0.0
Jacksonville	43	209	245	29.98	30.03	.00	80.0	−2.1	94	13	87	68	18	72	22	73	71	79	5.14	−1.1	15	7,998	sw.	44	se.	14	4	11	16	6.8	0.0	0.0
Florida Peninsula.							81.5	−0.7										77	4.32	−2.1										5.6		
Key West	22	10	64	30.00	30.02	−.01	82.8	−0.7	90	17	88	69	1	78	19	76	73	74	2.88	−0.7	11	6,021	se.	29	e.	1	9	16	6	4.7	0.0	0.0
Miami	25	71	79	30.02	30.05		80.7	−1.2	90	9	86	72	10	75	18	75	73	77	5.20	−2.0	22	4,923	se.	28	nw.	18	5	15	11	6.2	0.0	0.0
Sand Key	23	39	72	30.01	30.04	+.01	81.0		88	28	84	71	3	78	12	76	74	77	1.10		11	7,095	se.	39	e.	1	11	14	6	4.9	0.0	0.0
Tampa	35	79	87	30.00	30.03	−.01	81.0	−0.2	92	6	87	68	1	74	19	74	72	80	4.88	−3.6	17	3,836	w.	31	ne.	4	1	21	9	6.6	0.0	0.0
East Gulf States.							78.7	−1.9										79	5.89	+0.6										6.0		
Atlanta	1,174	190	216	28.80	30.02	.00	77.1	−1.0	92	24	86	60	1	68	24	70	66	74	2.60	−2.1	8	6,358	nw.	30	se.	2	10	10	11	5.5	0.0	0.0
Macon	370	78	87	29.62	30.01	−.01	79.3	−0.4	97	13	89	59	1	70	27	71	68	74	5.33	+0.7	13	3,742	sw.	31	w.	25	6	11	14	6.2	0.0	0.0
Thomasville	273	49	58	29.73	30.02	−.01	78.4	−3.4	96	14	87	60	19	70	29	72	71	84	10.59	+5.3	18	2,821	sw.	29	sw.	14	2	9	20	7.6	0.0	0.0
Apalachicola	36	42	49	29.98	30.02		79.0		93	13	85	68	3	73	22	74	73	83	8.54		18	5,077	sw.	33	se.	3	6	18	7	5.7	0.0	0.0
Pensacola	56	149	185	29.96	30.02	+.01	78.2	−2.8	93	13	84	62	20	72	20	74	72	83	7.28	0.0	12	7,818	w.	40	nw.	29	2	12	17	7.1	0.0	0.0
Anniston	741	9	57	29.27	30.04	+.02	77.2	−0.7	95	24	88	53	1	66	30				3.46	−1.3	10	2,555	sw.	20	n.	8	13	16	2	4.4	0.0	0.0
Birmingham	700	11	48	29.28	30.03	+.02	78.5	−3.0	95	12	88	60	1	69	25	70	68	76	6.42	+1.7	10	3,298	nw.	20	s.	6	10	13	8	4.9	0.0	0.0
Mobile	57	125	161	29.96	30.02	+.01	79.8	−0.9	94	23	88	64	20	72	21	74	72	84	4.98	−2.1	14	5,292	sw.	40	e.	22	4	15	12	6.8	0.0	0.0
Montgomery	223	100	112	29.77	30.02	.00	79.3	−2.4	96	12	88	62	1	71	24	72	69	76	3.81	−0.9	11	3,774	w.	36	ne.	8	9	7	15	6.3	0.0	0.0
Corinth	469	6					79.5		96	7	90	58	2	69	30				3.76		8		sw.				4	23	4		0.0	0.0
Meridian	375	85	93	29.62	30.00	−.02	77.9	−2.1	93	12	87	60	1	69	24	71	69	78	7.77	+3.3	13	3,044	sw.	24	nw.	25	10	14	7	5.1	0.0	0.0
Vicksburg	247	65	73	29.74	30.02	+.02	79.6	−1.7	94	25	88	65	1	71	24	73	71	79	3.85	−0.6	11	3,989	se.	25	nw.	25	11	8	12	5.4	0.0	0.0
New Orleans	53	76	84	29.96	30.01	+.01	80.2	−2.2	95	24	87	66	18	73	20	74	72	82	8.72	+2.2	16	4,288	sw.	26	sw.	9	3	15	13	6.6	0.0	0.0
West Gulf States.							82.3	+0.3										72	3.04	−0.1										4.6		
Shreveport	249	77	93	29.72	29.98	.00	82.4	+0.3	104	25	92	64	1	72	30	73	70	71	3.40	−0.3	6	4,483	s.	29	ne.	30	15	13	3	4.0	0.0	0.0
Bentonville	1,303	11	44				78.4	−0.1	98	24	89	59	1	68	27				1.28		3						16	11	4		0.0	0.0
Fort Smith	457	79	94	29.48	29.95	−.02	82.4	+1.4	101	24	93	63	1	72	26	72	68	68	3.41	−0.4	9	4,368	e.	42	w.	15	13	14	4	4.6	0.0	0.0
Little Rock	357	136	144	29.60	29.97	−.02	80.0	−0.9	98	24	89	61	1	71	23	72	69	74	7.86	+3.9	8	4,506	s.	41	w.	25	9	13	9	5.4	0.0	0.0
Brownsville	57	53	61	29.89	29.95		83.6		95	24	91	71	1	76	20	75	73	78	1.53		8	6,835	s.	24	n.	1	17	13	1	2.9	0.0	0.0
Corpus Christi	20	11	73	29.95	29.97	+.01	82.9	+0.2	95	29	89	70	8	76	18	76	74	79	1.06	−0.6	5	9,861	s.	33	se.	16	12	14	5	4.5	0.0	0.0
Dallas	512	109	117	29.43	29.96		85.6		103	25	95	69	21	76	23				0.62		2	5,107	s.	26	ne.	18	12	16	4	4.5	0.0	0.0
Fort Worth	670	106	114	29.23	29.93	−.03	85.2	+1.5	105	27	96	68	7	74	32	70	64	57	0.99	−2.0	2	5,549	e.	31	w.	27	10	18	3	4.5	0.0	0.0
Galveston	54	106	114	29.95	30.01	+.03	81.8	−1.6	91	23	86	68	1	78	14	76	74	81	5.80	+1.8	10	7,054	s.	31	se.	1	8	15	8	5.1	0.0	0.0
Groesbeck	461	11	56	29.49	29.96		84.5		101	31	96	66	21	73	27				0.14		2	7,064	sw.	50	s.	8	10	19	2	4.7	0.0	0.0
Houston	138	111	121	29.84	29.98		82.7	−0.3	97	24	91	70	2	74	23				0.82		4	4,786	s.	26	se.	1	12	13	6	4.6	0.0	0.0
Palestine	510	64	72	29.46	29.98	+.01	82.8	+0.6	100	25	93	66	20	73	23	72	68	68	1.04	−2.0	7	4,675	s.	22	ne.	21	5	22	4	5.4	0.0	0.0
Port Arthur	34	58	66	29.95	29.99		81.1		96	24	88	68	1	75	20	75	73	82	4.90		16	6,532	sw.	30	ne.	31	12	13	6	4.9	0.0	0.0
San Antonio	701	119	132	29.25	29.96	+.01	83.6	+1.2	99	15	94	65	21	73	25	72	67	66	2.54	+0.3	6	4,960	se.	48	se.	1	13	15	3	4.1	0.0	0.0
Taylor	582	55	63	29.40	30.01	+.05	83.2	+0.5	99	31	94	65	21	73	26				1.22	−1.4	4	5,667	s.	32	s.	8	9	18	4	4.7	0.0	0.0

TABLE I.—*Climatological data for weather bureau stations, July, 1923*—Continued.

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.												Precipitation.			Wind.										
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity.	Total.	Departure from normal.	Days with 0.01, or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet and ice on ground at end of month.
	Ft.	Ft.	Ft.	Ft.	Ft.	In.	°F.	°F.	°F.		°F.	°F.		°F.	°F.	°F.	°F.	N	In.	In.		Miles.								0-10	In.	In.
Ohio Valley and Tennessee.							76.2	−0.4										70	3.86	−0.2										5.0		
Chattanooga	762	189	213	29.21	30.01	−.01	77.0	−1.4	92	12	86	57	1	68	24	69	66	73	6.31	+2.4	9	4,140	sw.	37	sw.	8	5	21	5	5.5	0.0	0.0
Knoxville	996	102	111	28.97	30.00	−.02	76.6	−0.5	93	12	86	54	1	67	28	69	67	76	5.32	+1.1	7	3,585	sw.	26	w.	24	2	10	19	7.5	0.0	0.0
Memphis	399	76	97	29.57	29.99	−.01	80.2	−0.5	94	12	88	62	1	73	21	72	70	73	3.65	+0.1	8	4,294	sw.	39	sw.	28	11	16	4	4.3	0.0	0.0
Nashville	546	168	191	29.44	30.01	.00	78.5	−0.6	94	15	88	55	1	69	25	70	67	74	2.13	−2.2	8	4,284	w.	43	ne.	7	11	15	5	4.8	0.0	0.0
Lexington	989	193	230	28.97	30.01	.00	76.6	0.0	90	15	86	56	1	68	26	.....	.....	.....	5.01	+0.6	12	6,979	sw.	44	nw.	24	13	13	5	4.4	0.0	0.0
Louisville	525	219	255	29.44	30.02	+.02	78.3	−0.3	93	15	88	57	1	69	26	68	64	67	4.05	+0.3	9	5,609	ne.	48	nw.	12	10	14	7	4.5	0.0	0.0
Evansville	431	139	175	29.54	30.00	.00	80.2	+0.9	96	15	90	58	1	70	25	70	65	63	1.00	−2.8	6	5,570	w.	30	nw.	5	7	20	4	4.7	0.0	0.0
Indianapolis	822	194	230	29.14	30.01	+.02	76.2	+0.5	94	21	86	56	1	67	26	66	61	64	2.43	−1.7	8	6,370	ne.	40	nw.	3	12	12	7	4.4	0.0	0.0
Royal Center	736	11	55	29.23	30.01	.....	73.2	.....	94	21	85	51	1	62	33	.....	.....	.....	3.30	.....	8	5,173	sw.	40	nw.	15	9	12	10	5.0	0.0	0.0
Terre Haute	575	96	129	29.39	29.99	.....	77.6	.....	96	21	88	55	1	67	27	67	62	63	0.59	.....	7	5,183	sw.	28	e.	7	5	23	3	5.0	0.0	0.0
Cincinnati	628	11	51	29.34	30.00	.00	75.6	+0.5	92	20	87	51	1	64	30	.....	64	68	2.51	−1.0	10	3,685	ne.	32	n.	6	9	17	5	4.5	0.0	0.0
Columbus	824	179	222	29.16	30.01	+.01	74.8	0.0	92	21	85	55	1	65	26	65	61	67	4.09	+0.4	14	5,756	e.	50	nw.	6	11	10	10	5.0	0.0	0.0
Dayton	899	137	173	29.06	29.99	.....	75.8	−0.4	94	21	87	53	1	65	29	66	61	65	1.50	−1.8	11	5,221	ne.	42	w.	5	16	12	3	3.8	0.0	0.0
Elkins	1,947	59	67	28.03	30.02	+.01	69.0	−1.5	86	10	81	47	1	57	32	63	61	83	3.73	−0.9	11	2,465	w.	24	sw.	22	5	15	11	5.9	0.0	0.0
Parkersburg	638	77	84	29.38	30.03	+.02	74.7	−0.9	93	10	86	53	1	64	30	67	64	75	5.52	+0.9	10	2,782	se.	30	nw.	7	12	9	10	5.2	0.0	0.0
Pittsburgh	842	353	410	29.13	30.01	+.01	73.3	−1.3	91	10	83	56	1	64	30	64	60	68	6.74	+2.3	12	5,841	nw.	53	nw.	6	8	10	13	6.0	0.0	0.0
Lower Lake Region.							70.7	−0.8										65	1.95	−1.4										4.7		
Buffalo	767	247	280	29.20	30.02	+.05	69.8	0.0	85	18	77	56	26	63	22	62	57	65	0.71	−2.7	8	7,694	sw.	29	w.	26	8	16	7	5.3	0.0	0.0
Canton	448	10	61	29.52	29.99	.....	66.2	−4.3	88	20	78	42	23	55	32	.....	.....	.....	1.18	−2.0	8	5,050	sw.	33	e.	6	19	8	4	3.5	0.0	0.0
Oswego	335	76	91	.....	30.00	+.04	67.8	−2.6	84	20	75	54	24	60	24	.....	.....	.....	0.62	−2.6	9	5,109	s.	25	ne.	25	12	9	10	.....	0.0	0.0
Rochester	523	88	102	29.46	30.02	+.05	70.0	−0.7	90	20	80	51	26	60	28	61	55	63	1.97	−1.1	7	4,433	ne.	23	sw.	3	11	11	9	5.0	0.0	0.0
Syracuse	597	97	113	29.39	30.03	+.06	69.0	−1.8	88	20	78	50	23	60	27	.....	.....	.....	2.78	−0.9	10	5,369	s.	26	nw.	25	8	14	9	5.5	0.0	0.0
Erie	714	130	166	29.25	30.01	+.03	70.8	−0.2	88	20	79	55	26	63	24	63	57	62	0.93	−2.3	11	7,368	n.	37	se.	30	14	10	7	4.6	0.0	0.0
Cleveland	762	190	201	29.21	30.02	+.03	71.2	−0.2	86	10	78	57	1	64	23	63	57	63	2.09	−1.5	11	7,188	ne.	37	nw.	6	10	11	10	5.4	0.0	0.0
Sandusky	629	62	70	29.35	30.02	+.03	73.0	−0.4	92	10	80	57	1	66	23	.....	.....	.....	2.32	−1.5	12	4,443	ne.	38	n.	10	9	11	11	5.1	0.0	0.0
Toledo	628	208	243	29.35	30.02	+.03	73.2	0.0	93	10	82	59	17	64	26	64	60	66	2.77	−0.5	11	7,470	sw.	42	n.	10	18	6	7	3.8	0.0	0.0
Fort Wayne	856	113	124	29.11	30.02	.....	73.9	+0.4	93	10	84	52	1	64	31	65	61	68	5.20	.....	10	4,324	sw.	33	ne.	11	12	11	8	4.6	0.0	0.0
Detroit	730	218	258	29.24	30.02	+.04	72.6	+0.5	93	21	81	59	27	64	24	65	61	71	4.14	+0.7	10	5,850	e.	41	n.	10	15	8	8	4.4	0.0	0.0
Upper Lake Region.							68.8	+0.8										72	3.41	+0.3										4.7		
Alpena	609	13	92	29.37	30.04	+.07	66.2	+0.3	95	20	76	52	8	57	33	61	57	74	3.08	0.0	8	6,110	se.	38	nw.	30	13	6	12	5.2	0.0	0.0
Escanaba	612	54	60	29.36	30.02	+.05	66.5	0.0	89	19	74	51	3	59	26	63	60	81	6.62	+3.3	13	5,531	s.	36	ne.	29	12	9	10	5.0	0.0	0.0
Grand Haven	632	54	89	29.33	29.99	+.01	69.7	+1.0	89	31	79	51	1	60	28	64	59	68	1.44	−1.1	8	5,390	w.	25	nw.	28	13	14	4	4.1	0.0	0.0
Grand Rapids	707	70	87	29.26	30.01	+.03	73.4	+0.8	93	21	84	54	29	62	30	64	58	61	0.95	−1.7	6	3,238	e.	17	w.	21	8	14	9	5.0	0.0	0.0
Houghton	684	62	99	29.28	30.00	+.04	66.0	+0.7	88	31	76	48	28	56	31	.....	.....	.....	3.89	+0.8	12	5,892	e.	28	n.	13	8	14	9	5.5	0.0	0.0
Lansing	878	11	62	29.08	30.01	.....	70.6	−0.5	92	20	83	52	17	58	36	64	62	78	4.76	+1.5	9	2,236	ne.	16	sw.	6	15	10	6	4.4	0.0	0.0
Ludington	637	60	66	29.33	30.02	.....	67.6	.....	85	31	76	51	4	59	26	62	57	68	0.51	.....	6	5,124	s.	20	s.	9	17	10	4	3.5	0.0	0.0
Marquette	734	77	111	29.24	30.04	+.08	65.0	+0.1	94	19	74	48	27	56	30	59	55	73	4.11	+1.0	15	4,507	e.	20	sw.	9	6	14	11	6.1	0.0	0.0
Port Huron	638	70	120	29.33	30.02	+.04	69.8	+1.0	93	20	78	53	26	61	29	63	58	70	1.48	+1.3	10	5,854	ne.	29	n.	10	14	13	4	3.8	0.0	0.0
Saginaw	641	69	77	29.34	30.02	.....	70.3	.....	93	20	81	54	1	60	32	64	61	73	4.25	+0.6	10	4,269	ne.	22	ne.	5	14	6	11	5.0	0.0	0.0
Sault Sainte Marie	614	11	52	29.35	30.04	+.07	65.3	+3.4	90	19	77	47	1	54	36	58	54	72	3.80	+1.0	8	3,831	w.	31	sw.	30	12	10	9	5.0	0.0	0.0
Chicago	823	140	310	29.15	30.01	+.03	74.4	+0.5	95	10	80	62	1	68	26	66	61	66	2.67	−1.0	8	6,193	e.	24	nw.	6	17	10	4	3.4	0.0	0.0
Green Bay	617	109	144	29.34	30.00	+.03	71.2	+1.7	95	9	81	55	1	62	32	64	60	71	3.31	−0.2	11	6,195	s.	42	n.	14	8	14	9	5.9	0.0	0.0
Milwaukee	681	125	139	29.28	30.02	+.05	71.4	+1.3	93	10	79	56	4	63	30	63	59	67	1.98	−1.0	5	4,610	ne.	30	se.	23	12	12	7	4.4	0.0	0.0
Duluth	1,133	11	47	28.80	30.00	+.05	64.6	+0.7	89	19	73	49	5	56	29	60	58	81	5.40	+1.8	14	6,545	ne.	45	nw.	22	13	10	8	4.9	0.0	0.0
North Dakota.							72.4	+3.6										70	2.64	−0.3										5.2		
Moorhead	940	50	58	28.95	29.94	.00	72.5	+4.4	93	19	83	52	2	62	28	66	62	72	2.34	−1.4	7	4,642	n.	33	sw.	31	7	16	8	5.7	0.0	0.0
Bismarck	1,674	8	57	28.23	29.97	+.04	73.3	+3.5	94	8	85	52	1	62	30	66	62	70	4.77	+2.6	12	6,007	se.	42	n.	8	8	14	9	5.3	0.0	0.0
Devils Lake	1,482	11	44	28.40	29.94	+.01	71.8	+3.7	97	18	84	46	30	59	35	64	60	69	2.07	−1.7	9	5,423	se.	37	ne.	8	18	8	5	4.0	0.0	0.0
Ellendale	1,457	10	56	28.42	29.96	.....	71.5	.....	92	19	82	52	30	61	29	.....	.....	.....	3.62	.....	10	7,361	se.	43	nw.	5	8	15	8	5.4	0.0	0.0
Grand Forks	835	12	89	.....	.....	.....	72.1	.....	96	18	84	49	2	60	32	.....	.....	.....	3.46	.....	12	.....	sw.	60	se.	22	13	9	9	.....	0.0	0.0
Williston	1,878	41	48	27.98	29.91	−.01	71.8	+2.9	94	21	84	43	30	60	42	63	59	68	1.38	−0.6	11	5,285	se.	36	sw.	17	7	16	8	5.5	0.0	0.0
Upper Mississippi Valley.							77.6	+2.3										66	1.79	−1.9										4.4		
Minneapolis	918	102	208	28.99	29.95	.....	76.0	.....	97	9	86	56	28	66	28	.....	.....	.....	3.12	−0.7	6	6,506	s.	36	n.	10	9	11	11	5.3	0.0	0.0
St. Paul	837	236	261	29.09	29.98	+.03	75.2	+3.1	96	22	86	54	28	65	28	.....	.....	.....	2.51	−0.9	7	6,335	se.	52	nw.	29	15	14	2	3.7	0.0	0.0
La Crosse	714	11	48	29.23	29.98	+.02	76.2	+3.4	98	23	88	53	1	64	33	.....	.....	.....	0.62	−3.4	7	2,639	se.	17	w.	29	13	8	10	5.1	0.0	0.0
Madison	974	70	78	28.99	30.00	+.03	74.2	+2.1	93	21	84	55	1	65	26	66	61	68	2.28	−1.7	9	4,618	s.	31	ne.	22	7	16	8	5.2	0.0	0.0
Wausau	1,247	4	.....	28.72	30.03	.....	69.8	.....	91	9	80	50	28	59	30	.....	.....	.....	3.36	.....	11	.....	e.	.....	.....	.....	17	9	5	3.9	0.0	0.0
Charles City	1,015	10	49	28.94	29.98	+.02	76.3	+2.8	96	23	88	52	28	64	33	68	63	68	3.30	−0.3	10	3,419	se.	23	ne.	22	15	14	2	3.4	0.0	0.0
Davenport	606	71	79	29.34	29.99	+.02	78.4	+3.1	99	22	89	58	1	68	29	68	64	65	1.76	−1.8	5	3,946	e.	25	s.	23	11	16	4	4.4	0.0	0.0
Des Moines	861	84	97	29.08	29.96	.00	78.2	+2.8	98	23	89	57	1	68	30	69	64	65	0.78	−3.1	5	3,778	sw.	22	sw.	5	11	14	6	5.0	0.0	0.0
Dubuque	698	81	96	29.27	30.01	+.04	76.8	+2.7	96	22	87	55	1	66	32	67	62	66	1.67	−2.6	7	3,187	s.	19	n.	10	7	18	6	5.4	0.0	0.0
Keokuk	614	64	78	29.33	30.00	+.02	78.8	+1.9	97	22	89	61	1	69	31	68	63	61	1.61	−2.4	4	3,676	ne.	23	w.	11	13	8	10	5.0	0.0	0.0
Cairo	358	87	93	29.61	29.98	−.02	79.8	+0.2	96	24	89	59	1	71	22	71	68	72	2.01	−1.4	6	3,932	s.	22	nw.	12	8	14	9	5.7	0.0	0.0
Peoria	609	11	45	29.35	30.01	+.03	77.6	+2.2	98	22	90	54	2	66	34	68	63	65	1.35	−1.6	6	2,818	ne.	16	w.	3	22	6	3	2.2	0.0	0.0
Springfield, Ill	644	10	91	29.31	29.97	−.01	78.8	+2.3	98	22	89	57	1	69	28	69	64	65	1.31	−1.6	6	4,403	sw.	22	se.	30	15	12	4	4.0	0.0	0.0
Hannibal	534	74	109	29.42	29.98	.00	78.2	+1.4	96	22	89	60	29	68	32	.....	.....	.....	0.87	−2.9	6	4,528	sw.	27	nw.	11	17	9	5	3.8	0.0	0.0
St. Louis	567	265	303	29.38	29.97	−.02	80.6	+2.0	95	15	89	62	1	72	21	70	65	62	1.83	−1.6	7	6,341	s.	27	s.	16	12	15	4	4.4	0.0	0.0
Missouri Valley.							78.0	+2.2										68	2.79	−1.0									4.6			
Columbia, Mo.	781	11	84	29.16	29.98	.00	77.3	−0.1	94	11	88	58	29	67	27	.....	.....	.....	3.71	+0.1	7	3,609	e.	23	nw.	11	14	9	8	4.3	0.0	0.0
Kansas City	963	161	181	28.96	29.96	−.01	79.3	+1.8	97	11	88	60	2	71	24	70	65	66	3.40	−1.4	10	5,323	e.	36	nw.	12	15	13	3	4.0	0.0	0.0
St. Joseph	967	11	49	28.95	29.95	.....	79.2	.....	96	10	89	58	2	69	29	69	65	67	2.24	.....	8	4,000	se.	22	n.	27	18	11	2	3.1	0.0	0.0
Springfield, Mo.	1,324	98	104	28.62	29.99	+.01	77.2	+0.8	95	24	86	57	1	69	23	70	68	76	2.67	−2.1	8	5,087	se.	21	nw.	27	23	5	3	2.8	0.0	0.0
Iola	984	11	50	28.94	29.95	−.02	80.2	+2.1	102	24	92	61	2	69	31	.....	.....	.....	2.64	−1.3	4	3,064	s.	18	nw.	12	11	15	5	4.7	0.0	0.0
Topeka	987	92	107	.....	.....	.....	79.0	+1.4	98	11	89	60	2	69	30	.....	.....	.....	2.89	−2.0	11	5,121	se.	32	nw.	12	15	7	9	4.4	0.0	0.0
Drexel	1,299	10	54	28.61	29.96	.....	77.2	.....	96	23	88	54	28	67	31	.....	.....	.....	1.29	.....	7	5,662	s.	32	ne.	10	6	17	8	5.4	0.0	0.0
Lincoln	1,189	11	84	28.73	29.95	.00	78.8	+2.4	98	10	88	56	2	69	28	68	64	64	1.88	−2.0	6	5,929	s.	26	n.	27	4	18	9	5.9	0.0	0.0
Omaha	1,105	115	122	28.82	29.97	+.02	79.5	+2.8	99	10	89	60	1	70	25	70	65	67	0.86	−3.5	6	4,082	se.	25	n.	27	13	13	5	4.3	0.0	0.0
Valentine	2,598	47	54	27.30	29.96	+.03	76.0	+2.3	98	9	87	55	1	65	36	66	61	66	4.01	+0.6	17	6,715	s.	44	w.	5	6	20	5	5.1	0.0	0.0
Sioux City	1,135	94	164	28.79	29.96	+.01	77.6	+3.3	99	23	88	55	28	68	31	68	64	66	2.93	−0.7	12	6,744	s.	36	s.	31	11	16	4	4.5	0.0	0.0
Huron	1,306	59	74	28.60	29.96	+.02	75.2	+3.4	97	9	86	51	1	64	32	68	64	72	4.17	+1.2	11	5,658	se.	39	nw.	10	10	15	6	5.1	0.0	0.0
Pierre	1,572	70	75	28.30	29.92	−.01	77.0	+1.7	99	8	88	57	1	66	36	69	65	69	2.67	+0.3	11	5,675	se.	42	n.	4	11	13	7	5.0	0.0	0.0
Yankton	1,233	49	57	28.66	29.94	.00	78.2	+4.1	99	9	88	58	1	68	32	.....	.....	.....	1.68	−1.8	11	4,488	se.	26	s.	31	6	20	5	5.2	0.0	0.0

TABLE I.—*Climatological data for weather bureau stations, July, 1923*—Continued.

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.													Precipitation.			Wind.										
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity.	Total.	Departure from normal.	Days with 0.01, or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet and ice on ground at end of month.
	Ft.	Ft.	Ft.	Ft.	Ft.	In.	°F.	°F.	°F.		°F.	°F.		°F.	°F.	°F.	°F.	N	In.	In.		Miles.								0-10	In.	In.
Northern Slope.							70.9	+3.0										62	2.46	+0.9										4.3		
Billings	3,140	5	.....	.....	.....	.....	74.8	.....	102	21	91	53	3	59	41	.....	.....	.....	2.41	.....	10	.....	nw.	.....	.....	.....	12	14	5	.....	0.0	0.0
Havre	2,505	11	44	27.34	29.92	+.01	71.2	+2.9	96	21	84	47	31	59	38	63	58	69	4.33	+2.4	14	3,582	e.	37	sw.	15	18	8	5	3.9	0.0	0.0
Helena	4,110	87	112	25.82	29.92	−.01	69.8	+4.1	93	19	83	47	31	57	37	57	49	54	1.35	+0.3	11	5,801	sw.	34	sw.	12	15	11	5	4.3	0.0	0.0
Kalispell	2,973	48	56	26.90	29.89	−.04	68.0	+3.7	94	23	81	45	4	55	36	56	48	55	1.60	+0.8	8	4,322	nw.	26	sw.	17	20	8	3	3.4	0.0	0.0
Miles City	2,371	48	55	27.44	29.92	.00	77.4	+4.5	102	21	89	56	30	66	38	65	59	58	2.51	+1.1	13	4,653	se.	33	se.	3	16	12	3	3.8	0.0	0.0
Rapid City	3,259	50	58	26.64	29.97	+.04	72.7	+2.5	95	7	84	54	2	62	33	63	58	63	2.25	−0.3	13	4,722	se.	32	sw.	5	12	11	8	5.0	0.0	0.0
Cheyenne	6,088	84	101	24.13	29.95	+.03	67.5	+0.8	85	30	79	49	5	56	35	58	54	69	3.23	+1.2	15	6,428	s.	43	w.	28	9	20	2	4.8	0.0	0.0
Lander	5,372	60	68	24.72	29.93	+.01	71.2	+3.2	93	20	85	51	6	58	36	59	53	60	2.26	+1.4	12	3,766	sw.	54	sw.	6	10	16	5	5.1	0.0	0.0
Sheridan	3,790	10	47	26.13	29.89	.....	72.9	.....	98	17	87	52	30	59	39	62	57	64	6.37	.....	15	3,586	se.	30	se.	6	15	11	5	4.1	0.0	0.0
Yellowstone Park	6,200	11	48	23.98	29.96	+.04	64.0	+2.5	89	20	79	44	6	49	39	52	45	59	0.95	−0.2	13	4,806	s.	37	s.	30	12	15	4	4.3	0.0	0.0
North Platte	2,821	11	51	27.12	29.99	+.03	75.9	+3.0	95	7	87	55	1	65	30	67	64	72	3.63	+1.0	7	4,173	s.	21	n.	31	14	12	5	4.1	0.0	0.0
Middle Slope.							78.4	+1.5										61	2.38	−0.6										4.2		
Denver	5,292	106	113	24.82	29.96	+.05	72.6	+0.4	93	30	84	55	1	61	35	59	52	57	2.74	+1.1	14	5,095	s.	38	nw.	28	7	22	2	4.8	0.0	0.0
Pueblo	4,685	80	86	25.36	29.94	+.03	75.0	+0.8	96	31	88	55	1	62	39	61	55	60	4.05	+2.1	10	3,785	e.	40	nw.	31	6	24	1	4.7	0.0	0.0
Concordia	1,392	50	58	28.51	29.94	−.01	78.8	+0.7	98	23	89	59	28	69	31	69	65	67	4.48	+0.9	9	4,742	s.	25	s.	11	9	19	3	4.8	0.0	0.0
Dodge City	2,509	11	51	27.43	29.96	+.03	79.3	+0.9	102	31	91	60	1	67	32	67	62	63	1.95	−1.4	9	6,329	s.	35	sw.	4	19	11	1	2.6	0.0	0.0
Wichita	1,358	139	158	28.54	29.93	−.03	80.8	+1.8	102	24	91	62	1	71	29	70	65	62	0.89	−2.7	6	7,658	s.	29	s.	4	11	16	4	3.9	0.0	0.0
Broken Arrow	765	11	52	29.16	29.97	.....	81.2	.....	100	24	92	64	2	71	33	.....	.....	.....	1.17	.....	3	6,102	s.	52	nw.	15	9	19	3	4.9	0.0	0.0
Muskogee	652	4	.....	.....	.....	.....	84.0	.....	105	24	97	61	1	71	38	.....	.....	.....	0.63	.....	3	.....	s.	.....	.....	.....	16	15	0	.....	0.0	0.0
Oklahoma City	1,214	10	47	28.69	29.94	−.02	84.0	+4.2	105	31	96	62	1	72	29	70	64	58	0.15	−3.5	2	5,654	s.	25	nw.	12	14	16	1	4.0	0.0	0.0
Southern Slope.							81.2	+0.7										54	1.80	−0.7										4.2		
Abilene	1,738	10	52	28.17	29.92	−.01	83.8	+1.6	103	31	95	62	1	72	29	68	61	53	0.22	−2.2	4	5,638	s.	25	se.	21	8	21	2	5.0	0.0	0.0
Amarillo	3,676	10	49	26.33	29.96	+.04	78.3	+2.2	101	31	90	61	22	66	33	65	59	58	1.85	−1.3	7	6,432	se.	32	ne.	29	16	15	0	3.5	0.0	0.0
Del Rio	944	64	71	28.96	29.93	+.03	84.2	−0.5	100	15	94	63	21	74	27	.....	.....	.....	2.52	+0.3	4	6,601	se.	50	ne.	19	18	9	4	3.9	0.0	0.0
Roswell	3,566	75	85	26.38	29.90	+.02	78.5	−0.4	100	30	91	60	22	66	34	63	54	51	2.59	+0.4	8	5,378	se.	39	nw.	1	11	17	3	4.4	0.0	0.0
Southern Plateau.							78.8	−0.1										44	0.67	−0.5										3.3		
El Paso	3,762	110	133	26.17	29.82	−.02	82.1	+1.6	100	16	93	62	22	71	27	63	52	42	0.20	−1.9	6	7,301	se.	33	se.	21	20	10	1	3.2	0.0	0.0
Sante Fe	7,013	38	53	23.38	29.88	.00	69.7	+0.7	91	30	82	51	22	57	32	54	46	49	2.06	−0.6	13	4,055	e.	24	ne.	1	8	19	4	4.9	0.0	0.0
Flagstaff	6,908	10	59	23.46	29.86	+.03	65.8	+0.8	89	1	80	46	9	52	39	52	.....	55	1.08	.....	9	5,058	w.	29	w.	31	11	19	1	.....	0.0	0.0
Phoenix	1,108	11	81	28.68	29.79	+.01	89.2	−1.2	111	2	102	71	6	77	36	70	61	46	0.77	−0.3	5	4,086	e.	32	se.	12	10	17	4	4.4	0.0	0.0
Yuma	141	9	54	29.63	29.77	+.01	89.8	−1.0	111	2	103	67	9	76	41	71	61	45	0.28	+0.2	2	4,198	sw.	32	e.	30	21	7	3	2.6	0.0	0.0
Independence	3,957	5	25	25.91	29.85	+.02	77.2	−1.3	103	29	94	50	17	61	39	56	38	30	0.05	−0.1	1	6,188	se.	36	se.	6	26	4	1	1.5	0.0	0.0
Middle Plateau.							74.5	+2.0										37	0.36	−0.1										3.3		
Reno	4,532	74	81	25.47	29.87	.00	71.0	+3.5	101	28	88	42	7	54	42	52	37	38	0.03	−0.1	1	5,401	w.	36	w.	6	27	3	1	1.5	0.0	0.0
Tonopah	6,090	12	20	24.09	29.85	.....	74.1	.....	95	29	85	55	7	63	30	52	33	26	0.27	0.0	3	6,868	se.	31	se.	6	20	9	2	2.8	0.0	0.0
Winnemucca	4,344	18	56	25.59	29.89	−0.1	72.2	+1.6	100	27	90	38	7	55	48	53	38	36	0.24	+0.1	2	4,435	sw.	32	nw.	4	21	8	2	2.5	0.0	0.0
Modena	5,479	10	43	24.66	29.87	+0.1	72.0	+2.3	96	29	87	49	10	56	44	52	37	36	0.81	−0.4	5	8,559	sw.	48	s.	6	16	11	4	3.8	0.0	0.0
Salt Lake City	4,360	163	203	25.61	29.87	−.03	78.3	+2.6	95	30	89	62	2	68	31	59	48	39	0.21	−0.3	5	6,082	se.	33	s.	30	14	7	10	4.4	0.0	0.0
Grand Junction	4,602	60	68	25.39	29.88	−.01	79.2	0.0	99	30	92	59	8	66	36	61	51	45	0.62	+0.1	9	4,550	se.	30	nw.	31	7	19	5	4.8	0.0	0.0
Northern Plateau.							73.5	+2.6										47	0.74	+0.3										3.6		
Baker	3,471	48	53	26.44	29.96	+.01	67.4	+2.4	96	22	82	42	5	52	44	56	48	57	0.60	+0.2	6	4,231	se.	22	sw.	13	10	16	5	4.1	0.0	0.0
Boise	2,739	78	86	27.10	29.88	−.05	75.4	+2.5	100	27	90	49	5	60	39	59	47	43	0.68	+0.5	5	3,568	nw.	30	se.	13	22	6	3	2.5	0.0	0.0
Lewiston	757	40	48	29.11	29.90	−.05	76.8	+3.2	104	22	92	53	8	62	44	.....	.....	.....	1.10	+0.7	8	2,831	e.	23	nw.	2	16	10	5	3.5	0.0	0.0
Pocatello	4,477	60	68	25.48	29.88	−.04	73.5	+2.3	97	21	88	51	4	60	36	56	46	45	0.95	+0.3	6	5,223	se.	40	s.	24	15	9	7	4.4	0.0	0.0
Spokane	1,929	101	110	27.91	29.91	−.05	72.0	+3.0	99	22	86	50	8	58	37	57	46	47	0.77	+0.1	7	4,185	sw.	25	w.	30	14	15	2	3.5	0.0	0.0
Walla Walla	991	57	65	28.86	29.90	−.07	76.0	+1.9	102	22	88	52	8	64	36	59	47	41	0.33	−0.1	7	3,476	s.	20	sw.	15	16	11	4	3.4	0.0	0.0
North Pacific Coast Region.							63.7	+1.4										76	1.16	+0.5										4.9		
North Head	211	11	56	29.84	30.06	−.02	59.0	+1.3	69	13	62	52	13	56	17	56	55	87	1.31	+0.8	6	10,758	n.	39	n.	12	8	14	9	6.0	0.0	0.0
Port Angeles	29	8	53	30.02	30.05	.....	58.6	.....	81	14	66	45	26	51	29	.....	.....	.....	1.23	+0.8	5	5,193	sw.	21	w.	4	16	4	11	4.5	0.0	0.0
Seattle	125	215	250	29.92	30.05	+.01	64.4	+0.9	88	14	73	52	23	56	28	57	52	70	0.68	0.0	4	5,716	n.	28	s.	1	14	7	10	4.8	0.0	0.0
Tacoma	213	113	120	29.80	30.02	−.04	65.4	+2.0	92	14	75	52	23	56	31	.....	.....	.....	0.76	+0.1	5	5,350	n.	24	w.	1	9	14	8	5.4	0.0	0.0
Tatoosh Island	86	9	57	.....	30.04	−.01	56.8	+1.7	77	13	61	49	20	53	25	.....	.....	94	1.38	−0.4	6	6,620	sw.	38	sw.	2	4	6	21	.....	0.0	0.0
Yakima	1,071	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medford	1,425	4	.....	.....	.....	.....	72.8	.....	102	28	92	48	2	54	47	.....	.....	.....	0.59	.....	7	.....	nw.	.....	.....	.....	17	9	5	.....	0.0	0.0
Portland, Oreg.	153	68	106	29.86	30.02	−.03	67.8	+1.1	93	13	78	52	31	58	28	60	54	66	2.17	+1.6	5	4,023	nw.	16	n.	30	12	7	12	5.0	0.0	0.0
Roseburg	510	9	57	29.48	30.02	−.01	68.6	+1.2	96	29	82	49	5	56	40	58	52	63	0.59	+0.3	3	2,676	n.	15	w.	14	15	11	5	3.5	0.0	0.0
Middle Pacific Coast Region.							65.4	+0.7										64	0.62	0.0										2.9		
Eureka	62	73	89	29.99	30.06	+.01	58.2	+2.9	68	2	62	49	31	54	13	55	53	86	0.03	−0.1	2	4,643	n.	27	n.	5	5	13	13	6.4	0.0	0.0
Point Reyes	490	7	18	29.42	29.94	.....	54.6	+0.9	66	15	59	46	2	50	13	.....	.....	.....	0.05	.....	1	17,382	nw.	66	nw.	4	8	13	10	5.9	0.0	0.0
Red Bluff	332	50	56	29.52	29.86	−.03	80.1	−0.7	112	28	95	57	16	65	40	60	45	36	0.00	0.0	0	3,778	se.	19	se.	1	31	0	0	0.6	0.0	0.0
Sacramento	69	106	117	29.81	29.88	.00	73.6	+0.4	108	27	90	53	9	58	41	60	50	55	0.00	0.0	0	6,756	s.	22	s.	6	31	0	0	0.2	0.0	0.0
San Francisco	155	208	243	29.79	29.96	+.01	60.8	+2.3	82	27	67	51	1	54	28	55	52	79	0.00	0.0	0	8,086	w.	34	w.	8	24	6	1	2.6	0.0	0.0
San Jose	141	12	110	29.82	29.97	.....	65.2	−1.7	97	27	79	47	25	51	45	.....	.....	.....	0.00	0.0	0	4,746	nw.	21	nw.	6	24	7	0	1.7	0.0	0.0
South Pacific Coast Region.							70.1	−0.6										66	0.00	0.0										2.4		
Fresno	327	89	98	29.52	29.86	+.03	79.8	−2.2	107	27	96	56	17	63	38	60	45	36	0.00	0.0	0	6,592	nw.	26	nw.	2	30	1	0	0.5	0.0	0.0
Los Angeles	338	159	191	29.56	29.92	+.02	70.0	−0.2	85	20	80	56	10	61	24	61	57	72	T.	0.0	0	3,820	sw.	17	sw.	14	22	7	2	2.7	0.0	0.0
San Diego	87	62	70	29.82	29.91	−.01	67.0	−0.2	77	23	72	58	16	62	15	62	60	83	0.01	0.0	1	4,573	w.	19	s.	5	13	14	4	4.3	0.0	0.0
San Luis Obispo	201	32	40	29.75	29.97	+.02	63.6	+0.4	86	28	76	47	25	51	33	55	50	72	0.00	0.0	0	2,994	nw.	16	nw.	16	25	6	0	2.2	0.0	0.0
West Indies.																																
San Juan, P. R.	82	9	54	29.96	30.04	.....	79.6	.....	87	22	84	72	1	75	13	.....	.....	.....	2.74	−3.7	21	10,010	e.	34	e.	27	7	16	8	5.7	0.0	0.0
Panama Canal.																																
Balboa Heights	118	7	97	29.71	29.83	−.01	80.8	+0.4	91	14	87	70	27	74	17	75	74	85	3.15	−4.2	14	5,670	nw.	26	s.	28	0	17	14	7.3	0.0	0.0
Colon	36	7	97	29.80	29.84	−.02	81.6	+1.3	89	14	86	70	28	77	13	77	75	83	10.33	−5.2	19	7,611	n.	26	nw.	16	0	8	23	8.3	0.0	0.0
Alaska.																																
Juneau	80	11	54	29.97	30.06	.....	59.4	.....	82	7	68	47	15	51	32	55	51	74	4.10	.....	13	4,408	s.	25	nw.	15	9	8	14	6.4	0.0	0.0

TABLE II.—*Data furnished by the Canadian Meteorological Service, July, 1923.*

Stations.	Altitude above mean sea level, Jan. 1, 1919.	Pressure.			Temperature of the air.						Precipitation.		
		Station reduced to mean of 24 hours.	Sea level reduced to mean of 24 hours.	Departure from normal.	Mean max.+mean min.÷2.	Departure from normal.	Mean maximum.	Mean minimum.	Highest.	Lowest.	Total.	Departure from normal.	Total snowfall.
	Feet.	*In.*	*In.*	*In.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	*In.*	*In.*	*In.*
St. Johns, N. F	125	29.74	29.87	−0.10	59.4	+0.1	67.6	51.3	83	44	5.07	+1.18	0.0
Sydney, C. B. I	48	29.92	29.97	+.04	61.7	−0.6	70.9	52.5	83	44	5.10	+1.45	0.0
Halifax, N. S	88	29.87	29.97	+.01	62.9	−0.5	72.1	53.8	89	45	4.43	+0.38	0.0
Yarmouth, N. S	65	29.90	29.97	+.02	58.5	−1.0	66.2	50.8	75	46	2.10	−1.52	0.0
Charlottetown, P. E. I	38	29.89	29.93	+.03	62.4	−1.7	69.1	55.8	81	47	1.14	−2.35	0.0
Chatham, N. B	28	29.84	29.87	−.01	62.8	−2.2	73.3	52.2	88	44	3.25	−0.94	0.0
Father Point, Que	20	29.91	29.93	+.08	53.5	−4.1	62.1	45.0	73	34	2.00	−1.04	0.0
Quebec, Que	296	29.67	29.99	+.08	65.1	−0.4	74.8	55.4	88	45	0.72	−3.54	0.0
Montreal, Que	187	29.77	29.97	+.04	67.7	−0.8	76.8	58.6	85	50	3.81	−0.48	0.0
Stonecliffe, Ont	489												
Ottawa, Ont	236	29.74	30.00	+.06	67.6	−1.9	78.9	56.4	90	48	3.19	−0.28	0.0
Kingston, Ont	285	29.70	30.00	+.03	67.6	−0.6	75.7	59.5	84	50	0.32	−2.57	0.0
Toronto, Ont	379	29.60	29.99	+.02	68.9	+0.9	78.8	59.1	92	51	1.72	−1.20	0.0
Cochrane, Ont	930				62.8		75.5	50.1	88	39	2.49		0.0
White River, Ont	1,244	28.70	29.99	+.05	59.9	+0.4	74.9	44.9	92	33	2.17	−0.63	0.0
Port Stanley, Ont	592												
Southampton, Ont	656				64.5	−0.2	75.1	53.8	84	49	0.79	−1.19	0.0
Parry Sound, Ont	638	29.32	30.00	+.04	68.7	+2.7	81.3	56.1	90	45	0.34	−2.28	0.0
Port Arthur, Ont	644	29.31	30.02	+.08	64.1	+2.1	73.2	55.1	95	44	2.90	−0.58	0.0
Winnipeg, Man	760	29.12	29.93	.00	71.4	+5.4	83.2	59.7	96	45	3.55	+0.47	0.0
Minnedosa, Man	1,690	28.18	29.96	+.03	66.2	+4.0	76.4	56.1	88	41	6.00	+3.40	0.0
Le Pas, Man	860				65.6		77.2	54.1	85	38	2.22		0.0
Qu'Appelle, Sask	2,115	27.72	29.92	.00	66.7	+3.2	77.1	56.3	88	42	7.14	+4.66	0.0
Medicine Hat, Alb	2,144												
Moose Jaw, Sask	1,759				68.2		80.5	56.0	90	44	2.89		0.0
Swift Current, Sask	2,392	27.40	29.96	+.05	67.6	+1.1	79.6	55.6	91	47	4.23	+1.79	0.0
Calgary, Alb	3,428												
Banff, Alb	4,521												
Edmonton, Alb	2,150												
Prince Albert, Sask	1,450	28.42	29.97	+.06	65.9	+4.0	77.2	54.6	87	44	2.92	+0.87	0.0
Battleford, Sask	1,592	28.22	29.93	+.03	66.2	+1.5	77.1	55.3	86	44	3.68	+1.34	0.0
Kamloops, B. C	1,262												
Victoria, B. C	230	29.76	30.01	−.04	59.9	−0.1	67.4	52.3	82	48	0.96	+0.56	0.0
Barkerville, B. C	4,180												
Triangle Island, B. C	680												
Prince Ruppert, B. C	170												
Hamilton, Ber	151												

LATE REPORTS.

May, 1923.													
Calgary, Alb	3,428	26.36	29.92	+.08	50.9	+1.9	65.0	36.9	79	22	5.38	+3.61	0.0
June, 1923.													
Kamloops, B. C	1,262	28.62	29.99	+.02	64.5	+0.7	76.3	52.7	90	42	3.12	+1.70	0.0
Calgary, Alb	3,428	26.36	29.87	+.03	58.1	+2.1	69.9	46.4	85	40	7.73	+5.28	0.0
Port Stanley, Ont	592	29.33	29.97	.00	63.4	−0.4	74.1	52.8	86	40	1.47	−1.26	0.0
Hamilton, Ber	151	29.97	30.13	+.01	74.1	−0.9	79.3	69.0	84	60	1.62	−4.33	0.0