GENERAL CLIMATIC CONDITIONS.

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PRESSURE.

Compared with the normal the barometric pressure for the year, 1908 was in excess by small amounts over all portions of the United States, except a small area from Michigan westward to the valley of the Red River of the North, and in extreme eastern New England. The area of greatest excess covered the Rocky Mountain region from British Columbia to the Mexican border. Over practically the whole of Canada, except portions of British Columbia, the pressure for the year appears to have been below the normal by small amounts.

TEMPERATURE.

The average temperature for the year 1908 was above the normal in all districts of the United States and Canada, except over the Rocky Mountain and southern portion of the Plateau districts, and along the immediate Pacific coast. Over a vast extent of territory from the great plains eastward to the lower Mississippi and Ohio valleys and from Texas northward into Canada, the mean temperature for the year ranged from 2° to more than 4° above the normal.

The temperature for the various months and seasons of the year 1908 may be summarized as follows:

January was generally warm thruout all portions of the United States until near the end of the month, when a cold wave of considerable severity overspread the more northern districts. While moderate temperatures were the rule over the greater part of the country, some cold weather for the localities occurred along the Gulf coast of Texas and over the Florida Peninsula.

February continued warm over the districts west of the Mississippi, while to the eastward the temperatures were generally below the normal, with frequent and severe periods of cold over the Lake region and New England. Minimum temperatures from 30° to 40° below zero were reported from points in New York and New England, the lowest recorded in those districts in many years, and frosts occurred as far south as the Gulf coast and the central portions of Florida.

March was generally warm thruout, with no unusual extremes of temperature.

The mean temperature for April was above the normal over nearly all districts, and it was one of the warmest Aprils on record over portions of the south Atlantic and east Gulf States. Several moderate cold waves overspread the districts east of the Rocky Mountains, but they were of comparatively short duration.

May was a generally cold month west of the Rocky Mountains and over portions of the Missouri Valley. Over portions of the Plateau districts it was one of the coldest Mays in many years, and frequent and severe frosts occurred over the Pacific coast States. A rather severe cold wave occurred during the first few days of the month over the districts east of the Rocky Mountains, and frosts occurred over portions of the lower Mississippi Valley at a later date than for many years,

In June the average temperature was below the normal over nearly all the districts west of the Mississippi River, and it was an unusually cool month over portions of the central and northern Plateau districts, where frequent and damaging frosts occurred. East of the Mississippi River the temperatures were nearly normal, except about the first of the month, and again on the 15th, when unusually cold weather occurred in the Lake region and portions of northern New England.

July was without decided variations from the normal, except over portions of the north Pacific coast and northern Plateau where the month was unusually warm.

During August, warm weather continued over portions of the north Pacific coast, but the temperature was generally below the normal in other portions of the United States west of the Mississippi River. Over the districts east of the Mississippi no unusual variations from the normal occurred.

September was marked by uniformly high temperatures over the greater part of the United States, especially from New England westward over the Lake region, Ohio, Mississippi, and Missouri valleys to the Rocky Mountains, where the mean temperature for the month ranged from 3° to 7° per day above the normal. The temperature during the latter part of the month was unseasonably warm in the Lake region, and the Ohio and upper Mississippi valleys, the daily means ranging from 10° to 15° above the normal. During the latter part of the month cool weather set in over the Pacific coast, and by the end of the month had extended well into the Missouri and Mississippi valleys, bringing unusually cold weather for September over large portions of the districts from the north Pacific coast southeastward over the Plateau, Rocky Mountain, and Great Plains districts to central Texas.

The beginning of October was marked by generally cold weather over the central and eastern districts, due to the presence of an extensive area of high pressure over the upper Mississippi Valley, and cool weather continued over those districts until near the middle of the second decade when warm weather set in over the districts east of the Rocky Mountains, and continued without material interruption to near the end of the month. Over the districts west of the Rocky Mountains the weather was generally cool, and some unusually low minimum temperatures occurred along the Pacific coast and in southern Arizona. The month closed with cold weather prevailing over practically all districts except the northern Rocky Mountain and Plateau districts.

The cold weather prevailing at the end of October continued over the more eastern districts to about the 5th of November, during which time some unusually low temperatures occurred over the Ohio Valley, Middle Atlantic States, and New England. From the 5th to the 10th warm weather prevailed generally over all interior districts, but about the latter date an area of decided cold advanced from the northwest and by the 16th had overspread practically all districts east of the Rocky Mountains, the minimum temperature of the 13th going below zero in portions of the central Rocky Mountain region, and freezing temperatures occurred over all districts in the United States, except the immediate south Atlantic and Gulf coasts and over the lower elevations of the Pacific coast States. After the 16th generally warm weather prevailed to the end of the month, except in the upper Missouri Valley where, on the 30th, a decided cold wave was being experienced.

The cold wave over the upper Missouri Valley on November 30 gradually overspread the districts eastward and southward by December 4, and was followed by another during the 6th to 8th, after which moderate temperatures prevailed until about the 30th, when another cold wave appeared and by the end of the year had overspread the districts from the Rocky Mountains to the Mississippi and Ohio valleys and Lake region.

PRECIPITATION.

The annual precipitation for 1908 was less than the usual amount over all districts east of the Mississippi, except along the eastern slopes of the Appalachian Mountains from northern Virginia to western South Carolina, over the greater portions of the lower elevations of Virginia and North Carolina, and along the eastern and southern coasts of Florida. Precipita-

tion was also below the normal over the greater portions of Arkansas, Louisiana, and Texas, in the southern Rocky Mountain region, and generally over the Plateau and Pacific coast States. From the Mississippi River westward to the Rocky Mountain districts, except in the portions of Arkansas, Louisiana, Texas, and the southern Rocky Mountain region mentioned above, the precipitation for the year was above the normal. At points in southern Kansas, central Oklahoma, and northern Texas the excess ranged from 10 to 20 inches.

The most pronounced feature of the weather of the year 1908 was the remarkably severe and long-continued drought during the late summer and early fall months over the greater part of the Ohio Valley and Lake region, portions of the Middle Atlantic States and New England. The combined effect of high temperature and deficient rainfall during the latter part of August and thruout the most of September, October, and November resulted in one of the most disastrous droughts in the meteorological history of those districts.

The occurrence of this drought rather late in the season of crop growth and development did not result in such widespread disaster to agricultural interests as might have resulted had it occurred slightly earlier, but serious inconvenience resulted from the failure of the water supply. Many manufacturing establishments were forced to shut down or seriously curtail their production. The drying up of the streams and springs greatly inconvenienced the farmers in procuring water for their cattle and domestic supplies, the supply to cities and towns was greatly reduced, and the dry conditions of the forests made possible the occurrence, in portions of the Lake region and New England, of the most disastrous forest fires on record.

Rather full details of the above-mentioned drought will be found in the MONTHLY WEATHER REVIEW for the several months, and in the Monthly Climatological Summaries of the States located in the region affected.

Minor periods of drought occurred in Florida during February and March, and in New England during the latter part of June and early part of July.

Heavy rains in portions of Washington, Oregon, and Idaho during March 13 to 15 caused disastrous floods in the streams of those States and much damage was done. Heavy rains in the watershed of the Ohio during March also caused floods in that river and some of its tributaries, but without material damage.

During April high waters again prevailed in the Ohio and its southern tributaries, due to heavy rains in West Virginia and Kentucky during the latter part of March and the first of April.

Heavy rains in the Mississippi Valley, together with the flood from the Ohio River caused the Mississippi River to pass the flood stage during most of the month from Cairo to the Gulf. No material damage occurred, however. High waters also prevailed in the rivers of northern and eastern Texas.

During May heavy rains in north central Texas and the surrounding territory, from the 21st to 24th inclusive, resulted in the most disastrous floods known in portions of Texas and Oklahoma. A number of persons were drowned and millions of dollars worth of property destroyed.

During June heavy rainfall in the districts between the Mississippi River and the Rocky Mountains resulted in floods in many of the streams and rivers of that territory, and several million dollars' worth of property was destroyed. Full accounts of these floods appear in the REVIEW for June and July.

During the latter part of August heavy rains in the southern Appalachian mountain districts caused disastrous floods in the rivers from southern Virginia to Georgia. Some of the streams rose to greater heights than ever known before and much damage was done.

Heavy rains in eastern Colorado and over the greater part of Kansas and Oklahoma from October 18 to 22 caused high waters and extensive floods in those States, with property losses amounting to several millions of dollars.

During the last few days of November heavy rains again occurred over portions of Oklahoma and Kansas, causing floods of considerable proportions in the streams of those States during the latter part of November and the first part of December.

SNOWFALL.

Snowfall during January was light in the upper Lake region and there was a general deficiency in the mountain regions of the West.

During February generally heavy snows occurred over all northern districts from the northern Rocky Mountains to New England, but the amounts were generally light in other districts.

March snowfall was rather heavy from the upper Lakes westward to the Rocky Mountains and light in the remaining portions of the country.

During April the snowfall was generally light, except over portions of the upper Lake region and also in portions of central and eastern Ohio and in the mountains of West Virginia and western Pennsylvania, where on April 30 snow from 2 to 15 inches in depth occurred, a very unusual fall for so late in the season.

In May some heavy falls of snow occurred over the eastern slopes of the Rocky Mountains from Colorado to Montana, and heavy falls also occurred locally in the mountains of California and portions of the Plateau region.

In October heavy snows occurred in the mountains of the West, especially along the Main Divide, causing the loss of several human lives and much suffering and loss of life to cattle and sheep caught in the high ranges without protection.

Heavy snows for the season occurred over the Appalachian Mountain districts on November 13 and 14, and during the latter part of the month some unusually heavy falls occurred over the western slopes of the Rocky Mountains from Wyoming to New Mexico, and over the Great Plains from Kansas to North Dakota. Over other portions of the United States the snowfall during November was light.

December was a month of generally well-distributed snowfall with local heavy falls in portions of the Middle Atlantic States, northern New York, the lower Michigan Peninsula and on the western slopes of the mountains of Wyoming, Colorado and northern Arizona, and in portions of Utah.

SEVERE WIND STORMS.

Severe winds visited Illinois on March 27 and May 5.

Severe tornadoes occurred at numerous points in Louisiana and Mississippi on April 23 and 24, resulting in the loss of many lives and much damage to property. Similar storms, but of less violence, occurred in portions of Texas, Louisiana, Missouri, and Nebraska on May 12 and 13, in Minnesota on May 24, and in Wyoming on May 31.

During June severe storms possessing the characteristics of tornadoes were reported from many points in Nebraska, South Dakota, and Wisconsin. Severe windstorms also swept across Ohio on June 19.

Ohio was again visited by a tornado on August 12 and by a destructive thundersquall on August 17.

November brought tornadoes to New Mexico and Oklahoma on the 5th, to Arkansas and Oklahoma on the 23d, and to Arkansas and Wisconsin on the 25th. The Arkansas tornadoes of the 23d were numerous and very destructive.

TABLE I.—*Annual climatological summary, Weather Bureau stations, 1908.*

Districts and stations.	Elevation of barometer above sea level.	Pressure in inches.* Actual, reduced to mean of 24 hours.	Pressure in inches.* Sea level, reduced to mean of 24 hours.	Pressure in inches.* Departure from normal.	Temperature of the air, in degrees Fahrenheit. Mean max.+mean min.÷2.	Temperature of the air, in degrees Fahrenheit. Departure from normal.	Temperature of the air, in degrees Fahrenheit. Maximum.	Temperature of the air, in degrees Fahrenheit. Mean maximum.	Temperature of the air, in degrees Fahrenheit. Minimum.	Temperature of the air, in degrees Fahrenheit. Mean minimum.	Temperature of the air, in degrees Fahrenheit. Annual range.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation. Total, in inches.	Precipitation. Departure from normal.	Precipitation. Days with .01, or more.	Winds. Total movement, miles.	Winds. Prevailing direction.	Winds. Max. velocity. Miles, per hour.	Winds. Max. velocity. Direction.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall, inches.†
New England.					65.9	+1.3							74	34.00	— 7.91									5.3	
Eastport	76	29.88	29.96	—.01	42.5	+1.4	86	50	—11	35	97	35	77	35.56	— 7.86	137	99,668	s.	69	se.	69	145	152	6.5	91.7
Portland, Me	103	29.88	30.00	.00	46.0	+0.6	98	54	— 5	38	103	36	70	30.74	—11.90	120	85,037	sw.	61	se.	148	106	112	5.0	49.8
Concord	288	29.70	30.01	—.01	46.3	+0.7	95	57	—11	36	106	.....	.....	26.25	—13.95	110	49,455	nw.	40	nw.	228	67	71	3.5	56.6
Burlington	404	29.57	30.02	+.01	44.2	+1.2	96	54	—27	35	123	.....	.....	23.49	— 8.12	144	106,195	s.	70	s.	95	115	156	6.2	71.8
Boston	125	29.88	30.02	+.01	51.1	+1.3	97	59	— 2	43	99	40	70	30.07	—13.43	107	96,500	sw.	48	sw.	129	108	129	5.5	26.2
Nantucket	12	30.00	30.01	—.01	50.0	+0.4	89	56	3	44	86	44	84	35.78	— 1.33	124	144,656	sw.	83	ne.	124	128	114	5.7	22.7
Block Island	26	30.00	30.03	+.01	50.1	+0.5	87	56	4	44	83	43	78	36.47	— 8.02	112	155,702	sw.	74	n.	136	127	103	5.0	15.4
Providence	160	29.86	30.04	+.02	50.3	+0.5	95	60	— 2	41	97	39	71	36.09	— 7.41	120	64,236	w.	37	e.	160	114	92	4.7	34.1
Hartford	159	29.86	30.04	+.02	50.5	+2.0	96	60	— 6	41	102	40	72	42.36	— 3.07	115	66,421	s.	48	s.	101	135	130	5.9	40.6
New Haven	106	29.92	30.04	+.01	51.3	+1.8	94	60	— 3	43	97	40	70	43.33	— 3.98	117	81,670	n.	54	se.	151	121	94	4.7	44.0
Middle Atlantic States.					53.6	+1.0							74	38.59	— 2.93									5.4	
Albany	97	29.93	30.03	.00	49.1	+1.5	93	58	—15	40	168	39	71	28.41	— 8.05	118	64,644	s.	41	nw.	110	153	103	5.4	49.0
Binghamton	871	29.10	30.04	.00	47.4	+0.8	95	58	—21	37	116	.....	.....	27.16	— 5.87	134	56,184	w.	39	w.	78	97	191	6.6	70.3
New York	314	29.70	30.04	.00	53.5	+1.8	93	60	1	46	92	43	70	41.43	— 3.33	104	107,095	nw.	60	w.	128	126	112	5.1	32.2
Harrisburg	374	29.66	30.07	+.02	52.9	+1.3	97	61	1	44	96	41	69	33.47	— 3.91	108	63,573	w.	46	nw.	140	118	108	5.0	44.2
Philadelphia	117	29.97	30.07	+.02	55.5	+1.9	97	63	5	48	92	45	72	38.13	— 3.14	109	87,987	nw.	42	se.	131	124	111	5.1	25.8
Scranton	805	29.18	30.05	+.01	50.1	+1.4	95	60	— 7	40	102	39	69	32.59	— 4.56	126	63,753	sw.	44	w.	100	109	157	6.0	66.7
Atlantic City	52	30.01	30.07	+.03	53.1	+0.7	92	60	6	46	86	45	76	37.88	— 3.05	112	74,537	sw.	43	se.	112	110	144	5.7	12.8
Baltimore	123	29.93	30.06	+.01	56.2	+1.1	98	64	9	48	89	45	70	35.41	— 7.89	109	62,465	sw.	40	ne.	116	98	152	5.7	17.3
Washington	112	29.94	30.07	+.01	55.4	+0.7	99	65	6	46	93	44	71	38.33	— 5.28	112	61,455	nw.	43	nw.	134	126	106	5.1	18.3
Lynchburg	681	29.34	30.09	+.02	56.8	+0.4	97	67	12	47	85	47	76	42.71	— 0.84	107	34,080	nw.	27	nw.	141	123	102	5.2	18.2
Mount Weather	.....	28.22	30.05	—.01	50.8	+1.2	89	58	4	43	85	42	76	39.55	— 2.12	123	123,849	nw	75	nw.	124	117	125	5.4	30.9
Norfolk	91	29.98	30.08	+.03	60.1	+1.0	94	68	19	52	75	51	76	44.25	— 5.41	124	82,825	s.	56	se.	142	104	120	5.0	8.8
Richmond	144	29.93	30.08	+.02	58.4	—0.1	96	68	15	49	81	.....	.....	52.78	+11.04	123	70,030	s.	52	sw.	155	101	110	4.8	13.8
Wytheville	2,293	27.70	30.09	+.02	52.4	—0.2	90	63	3	42	87	46	86	48.20	+ 1.35	149	44,831	w.	40	nw.	154	104	108	4.8	30.7
South Atlantic States.					63.5	+1.1							77	48.32	— 1.69									5.1	
Asheville	2,255	27.73	30.09	+.02	55.5	+1.4	90	66	5	45	85	47	81	46.35	— 3.36	115	64,901	se.	44	e.	127	129	110	5.1	23.9
Charlotte	773	29.25	30.09	+.02	60.4	+0.5	95	69	17	51	78	48	71	54.40	+ 5.08	113	58,751	ne.	40	sw.	132	124	110	5.2	5.6
Raleigh	376	29.67	30.08	+.02	60.4	+0.8	96	70	16	51	80	49	72	56.63	+ 6.90	115	61,519	ne.	40	sw.	143	116	107	5.0	5.0
Wilmington	78	29.99	30.08	+.02	63.7	+1.5	93	72	21	55	72	54	79	53.98	+ 2.84	117	73,341	ne.	48	ne.	134	156	76	4.7	0.4
Charleston	48	30.02	30.07	.00	66.7	+1.1	95	74	26	60	69	58	81	31.41	—20.76	102	97,059	sw.	47	ne.	131	161	102	4.6	
Columbia, S. C.	351	29.69	30.07	.00	63.8	+0.6	97	74	20	54	77	51	72	44.48	— 1.72	111	62,538	ne.	44	sw.	108	149	109	5.4	0.4
Augusta	180	29.88	30.07	.00	64.7	+1.1	96	75	21	55	75	54	76	44.62	— 3.39	108	55,960	ne.	57	sw.	177	113	76	4.1	T.
Savannah	65	30.00	30.07	+.01	67.2	+1.7	97	76	25	59	72	57	78	47.56	— 2.90	113	66,316	w.	36	w.	135	127	104	5.0	
Jacksonville	43	30.02	30.07	+.01	69.3	+1.1	95	77	28	62	67	62	84	55.44	+ 2.09	112	81,647	ne.	68	s.	144	138	84	4.8	
Florida Peninsula.					74.4	+0.7							80	47.17	— 3.60									4.4	
Jupiter	28	30.01	30.04	+.01	74.0	+0.2	95	80	40	67	55	67	82	70.42	+10.05	161	92,647	se.	48	nw.	83	224	59	5.2	
Key West	22	30.01	30.03	—.02	76.8	0.0	91	82	51	72	40	68	78	38.83	+ 0.12	108	77,885	ne.	50	w.	166	153	47	4.2	
Tampa	35	30.03	30.06	+.02	72.3	+1.9	96	81	33	64	63	63	79	32.25	—20.96	109	67,337	ne.	40	w.	184	127	55	3.8	
East Gulf States.					65.9	+1.3							75	47.12	— 5.70									5.1	
Atlanta	1,174	28.84	30.08	+.01	61.7	+0.8	96	70	16	53	80	50	73	48.83	— 0.66	109	99,649	nw.	56	nw.	160	92	114	5.0	2.5
Macon	370	29.68	30.08	+.02	65.0	+2.1	97	75	22	55	75	.....	.....	50.11	+ 2.98	105	47,099	nw.	31	w.	146	113	107	4.8	T.
Thomasville	273	29.78	30.08	+.02	67.6	+0.5	97	79	23	56	74	58	80	40.90	— 9.71	112	47,160	s.	38	sw.	164	118	84	4.4	
Pensacola	56	30.01	30.07	+.02	68.3	+0.4	93	75	28	61	65	.....	.....	42.01	—14.40	102	84,799	ne.	44	se.	135	117	114	5.0	
Anniston	741	29.31	30.10	+.04	62.6	+1.9	98	73	16	52	82	.....	.....	43.80	— 5.69	108	52,308	se.	40	se.	116	84	166	6.0	T.
Birmingham	700	29.32	30.09	+.03	64.1	+0.5	98	74	17	55	81	52	72	39.52	—10.11	103	60,559	e.	43	se.	84	158	124	5.8	T.
Mobile	57	30.00	30.06	+.01	68.4	+2.3	97	76	28	60	69	58	78	56.90	— 5.30	107	63,190	se.	36	se.	137	164	65	4.7	
Montgomery	223	29.83	30.08	+.02	66.0	+0.9	98	76	22	56	76	53	70	46.06	— 5.28	98	57,221	e.	48	s.	119	132	115	5.4	
Meridian	375	29.67	30.06	.00	64.6	+1.5	95	75	20	54	75	54	75	49.89	— 3.45	101	47,899	sw.	34	w.	163	100	103	4.8	T.
Vicksburg	247	29.79	30.07	+.01	66.4	+1.6	96	75	24	58	72	55	74	49.22	— 4.66	112	58,655	se.	46	nw.	141	119	106	4.8	
New Orleans	51	30.00	30.05	+.01	70.1	+1.1	94	78	32	62	62	60	78	51.06	— 6.46	114	74,229	se.	40	se.	109	167	90	5.1	
West Gulf States.					66.3	+1.4							74	39.71	— 0.11									4.6	
Shreveport	249	29.78	30.05	+.02	66.6	+1.4	97	76	23	57	74	55	73	58.06	+ 1.40	108	61,861	se.	52	se.	150	116	100	4.8	
Bentonville	11	28.65	30.02	—.01	58.3	+1.3	95	69	7	48	88	.....	.....	46.56	+ 3.44	107	53,095	s.	32	sw.	168	105	93	4.6	24.1
Fort Smith	457	29.54	30.02	—.01	62.1	+1.6	94	72	14	52	83	51	72	52.68	+11.26	107	70,914	e.	48	w.	154	122	90	4.6	T.
Little Rock	357	29.67	30.05	+.01	63.3	+1.8	96	72	18	54	78	51	70	37.05	—13.00	107	78,310	s.	59	s.	145	125	96	4.7	T.
Corpus Christi	20	29.99	30.01	+.02	71.9	+1.9	95	78	35	66	60	63	79	19.00	— 8.24	74	98,117	se.	47	e.	143	138	85	4.6	
Fort Worth	670	29.31	30.02	+.01	65.9	+0.9	100	76	20	56	80	.....	.....	45.07	+18.13	89	91,684	s.	53	nw.	163	144	59	4.2	T.
Galveston	54	29.99	30.05	+.02	70.3	+0.9	91	75	32	66	59	63	82	42.01	— 5.16	89	100,344	se.	62	ne.	152	142	72	4.6	
Palestine	510	29.49	30.02	.00	66.8	+1.6	96	76	23	58	63	56	75	33.85	— 9.29	100	53,587	s.	42	w.	76	126	139	5.8	T.
San Antonio	701	29.27	30.00	+.01	69.7	+1.8	102	80	22	59	80	56	70	28.52	+ 1.60	81	60,263	se.	47	nw.	149	143	74	4.6	
Taylor	583	29.41	30.02	+.02	67.8	+1.3	100	78	20	58	80	.....	.....	34.32	— 1.25	88	78,485	s.	48	nw.	177	106	83	4.1	0.3
Ohio Valley and Tenn.					57.0	+1.4							70	36.01	— 7.53									5.3	
Chattanooga	762	29.28	30.10	+.03	61.2	+1.3	95	71	13	52	82	49	71	42.17	— 8.67	127	52,983	sw.	42	nw.	111	120	132	5.6	0.7
Knoxville	1,004	29.02	30.08	+.01	59.1	+1.7	95	69	12	50	83	48	72	38.38	—11.15	119	42,587	ne.	34	sw.	92	112	162	6.1	1.0
Memphis	399	29.65	30.08	+.03	63.0	+1.7	95	71	16	55	79	53	74	47.46	— 3.02	103	74,865	s.	61	w.	146	83	137	5.2	0.1
Nashville	546	29.50	30.08	+.02	60.8	+1.5	97	70	14	51	83	49	71	34.04	—14.59	113	51,858	sw.	42	se	121	105	140	5.5	T.
Lexington	989	29.00	30.08	+.02	56.1	+1.1	94	65	5	47	89	.....	.....	37.60	— 4.59	121	90,041	s.	49	sw.	166	78	122	4.8	15.7
Louisville	525	29.49	30.07	+.01	58.7	+1.9	98	68	7	49	91	45	66	37.85	— 6.57	115	70,135	sw.	48	w.	136	120	110	5.0	7.5
Evansville	431	29.58	30.05	.00	58.3	+1.9	97	67	8	50	89	.....	.....	35.69	— 7.56	108	65,716	s.	43	sw.	113	188	65	4.8	12.4
Indianapolis	822	29.16	30.05	+.01	54.1	+1.4	95	63	0	45	95	42	68	31.25	—10.35	110	88,388	sw.	48	sw.	110	123	133	5.8	15.6
Cincinnati	628	29.38	30.06	.00	56.6	+1.4	98	66	3	47	95	42	63	27.29	—11.13	113	59,336	sw.	40	w.	136	117	113	5.1	9.7
Columbus	824	29.18	30.06	+.01	53.5	+1.4	96	63	1	44	95	41	68	30.14	— 6.86	121	102,866	se.	70	w.	140	124	102	4.8	13.8
Pittsburg	842	29.14	30.06	+.01	53.2	+0.5	94	62	— 1	44	95	41	68	30.17	— 6.27	135	86,088	nw.	67	w.	110	138	118	5.4	27.9
Parkersburg	638	29.41	30.07	+.01	55.1	—1.5	98	65	7	45	91	44	74	31.83	— 8.50	129	50,539	s.	48	nw.	142	108	116	5.4	7.2
Elkins	1,940	28.02	30.10	+.04	51.2	+1.3	92	63	— 8	39	100	42	80	44.25	+ 1.38	167	33,874	w.	34	ne.	135	96	135	5.6	48.9
Lower Lake Region.					48.6	+0.8							73	30.15	— 4.79									5.6	
Buffalo	767	29.18	30.02	.00	47.9	+0.9	88	55	— 8	41	96	40	76	34.24	— 3.12	169	131,759	sw.	76	sw.	104	134	128	5.7	70.3
Canton	.....	29.52	30.01	—.01	43.1	—0.9	92	53	—40	33	132	.....	.....	33.60	— 2.66	168	104,589	sw.	65	w.	125	106	135	5.6	83.4
Oswego	335	29.64	30.01	—.01	46.8	0.0	91	55	—18	39	109	39	77	33.93	— 2.33	157	97,782	s.	44	w	107	95	164	6.0	81.7
Rochester	523	29.45	30.03	+.01	48.7	+1.7	92	57	— 5	40	97	38	71	27.49	— 6.86	150	79,623	sw.	46	w.	108	103	155	6.0	67.3
Syracuse	597	29.38	30.03	.00	47.8	+0.6	92	56	—17	39	109	.....	.....	26.96	— 7.42	160	106,923	s.	62	s.	93	105	168	6.3	74.6
Erie	713	29.25	30.03	.00	49.7	+0.9	90	57	— 4	42	94	39	68	26.72	—11.91	139	100,171	s.	54	w.	128	97	141	5.5	45.7
Cleveland	762	29.21	30.03	—.01	50.4	+1.1	92	58	0	43	92	40	69	27.60	— 7.52	153	132,166	se.	60	w.	121	115	130	5.4	69.5
Sandusky	629	29.35	30.03	—.01	51.1	+1.1	95	59	4	44	91	.....	.....	26.48	— 7.61	121	75,868	sw.	40	nw.	148	93	125	4.8	31.7
Toledo	628	29.35	30.04	+.01	50.9	+1.3	97	59	1	42	96	40	71	35.88	+ 5.21	120	128,759	sw.	60	sw.	167	96	103	4.6	37.0
Detroit	730	29.24	30.04	+.01	49.3	+1.1	95	58	— 2	41	97	41	77	28.59	— 3.65	120	125,729	sw.	58	sw.	120	100	146	5.7	67.2
Upper Lake Region.					45.1	+1.9							76	28.38	— 3.32									5.9	
Alpena	609	29.33	30.00	+.01	43.5	+1.8	94	52	—13	34	107	36	79	25.61	— 7.66	135	97,872	nw.	52	se.	93	122	151	6.1	71.8
Escanaba	612	29.32	30.00	—.01	42.5	+1.9	90	50	—12	35	102	35	77	23.93	— 7.63	119	90,168	s.	56	e.	83	113	170	6.3	71.2
Grand Haven	632	29.32	30.00	—.02	47.4	+0.7	90	55	0	40	90	40	76	33.35	+ 1.90	126	112,183	sw.	51	nw.	114	128	124	5.6	58.8
Grand Rapids	707	29.24	30.02	.00	49.0	+0.9	95	58	— 1	40	96	39	73	31.17	— 0.37	119	101,148	sw.	48	sw.	83	121	162	6.4	43.4
Houghton	668	29.23	29.97	—.03	42.4	+2.2	92	51	—19	34	111	.....	.....	29.85	— 2.84	170	66,099	e.	36	nw.	78	130	158	6.4	88.6
Marquette	734	29.18	29.99	—.01	43.1	+2.6	94	51	— 9	36	103	33	71	30.29	— 2.42	158	97,572	nw.	48	sw.	66	150	150	6.2	131.9
Port Huron	638	29.32	30.02	.00	47.1	+1.8	95	56	— 9	38	104	39	75	24.20	— 6.53	114	102,802	sw.	60	w.	128	101	137	5.6	55.1
Sault Sainte Marie	614	29.30	30.00	.00	40.8	+2.4	92	49	—25	32	117	34	80	26.06	— 5.37	150	80,593	se.	48	w.	80	85	201	6.9	57.9
Chicago	823	29.14	30.03	.00	51.7	+3.2	96	59	— 2	45	98	43	75	34.83	+ 1.47	109	132,751	sw.	68	w.	133	116	117	5.1	68.9

TABLE I.—*Annual climatological summary, Weather Bureau stations, 1908*—Continued.

Districts and stations.	Elevation of barometer above sea level.	Pressure in inches.* Actual, reduced to mean of 24 hours.	Pressure in inches.* Sea level, reduced to mean of 24 hours.	Pressure in inches.* Departure from normal.	Temperature of the air, in degrees Fahrenheit. Mean max. + mean min. ÷ 2.	Temperature Departure from normal.	Temperature Maximum.	Temperature Mean maximum.	Temperature Minimum.	Temperature Mean minimum.	Temperature Annual range.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation. Total, in inches.	Precipitation. Departure from normal.	Precipitation. Days with .01, or more.	Winds. Total movement, miles.	Winds. Prevailing direction.	Winds. Max. velocity. Miles, per hour.	Winds. Max. velocity. Direction.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall, inches.†
Upper Lake Region—Con.																									
Milwaukee	681	29.28	30.03	+.01	47.8	+2.5	95	55	−7	40	102	39	76	28.32	−3.16	102	96,611	w.	50	se.	165	115	8.6	4.4	67.6
Green Bay	617	29.31	29.98	−.03	45.7	+2.7	95	55	−15	37	110	36	73	21.92	−9.28	106	97,631	sw.	59	w.	89	118	159	6.4	53.6
Duluth	1,133	28.74	29.98	−.03	39.8	−0.4	92	48	−29	31	121	32	79	31.05	+1.08	104	119,437	ne.	60	w.	105	148	113	5.5	43.4
North Dakota.					42.2	+3.0							75	21.42	+0.12									5.1	
Moorhead	940	28.97	30.00	−.01	41.6	+3.2	96	52	−29	31	125	34	81	25.93	+0.98	103	78,468	nw.	40	nw.	145	102	119	4.9	46.1
Bismarck	1,674	28.21	30.02	+.02	42.7	+2.7	100	55	−21	31	121	31	69	16.91	−0.75	85	101,619	nw.	68	nw.	119	142	105	5.3	34.2
Upper Miss. Valley.					51.5	+1.8							72	32.12	−2.83									5.0	
St. Paul	837	29.08	29.99	−.02	46.0	+2.1	96	55	−24	37	120	35	69	31.60	+2.89	105	96,377	nw.	54	sw.	133	149	84	4.9	39.7
La Crosse	714	29.22	30.00	−.02	47.6	+1.7	95	57	−13	38	108	.....	.....	31.57	+0.35	106	51,154	s.	28	sw.	99	106	161	5.9	29.1
Madison	974	28.95	30.01	−.01	47.1	+1.7	94	56	−10	38	104	38	73	25.67	−6.12	102	91,202	sw.	54	ne.	137	114	115	5.1	28.8
Charles City	1,015	28.93	30.02	.00	46.7	+2.1	94	57	−14	36	108	39	80	34.19	+2.92	95	77,995	nw.	35	ne.	83	144	139	6.0	28.7
Davenport	606	28.36	30.02	−.01	51.2	+1.8	95	60	−4	42	99	42	72	31.50	−1.11	101	70,128	nw.	39	s.	157	96	113	4.8	24.3
Des Moines	861	29.09	30.01	−.01	50.9	+1.6	95	61	−7	41	102	41	72	35.89	+3.40	101	76,865	sw.	40	sw.	105	157	104	5.5	23.7
Dubuque	698	29.28	30.04	+.02	49.2	+1.3	96	58	−8	40	104	39	72	24.11	−9.96	99	56,636	se.	42	n.	144	106	116	5.1	27.5
Keokuk	614	29.36	30.04	+.01	53.8	+2.4	95	63	−2	44	97	42	72	34.28	−0.85	91	67,328	nw.	39	sw.	188	105	73	3.9	22.1
Cairo	356	29.68	30.06	+.01	59.6	+2.0	96	68	10	51	86	48	70	38.47	−3.35	121	77,916	s.	48	s.	127	109	130	5.4	13.2
Peoria	609	29.37	30.05	+.02	51.6	+1.7	95	62	−3	41	98	41	73	33.96	−2.42	107	76,437	s.	49	sw.	182	103	81	4.2	18.2
Springfield, Ill.	644	29.34	30.03	+.01	54.2	+2.0	97	64	2	45	95	42	68	29.68	−7.38	99	79,649	s.	44	w.	168	91	107	4.6	31.7
Hannibal	534	29.45	30.03	.00	54.2	+1.1	95	64	−1	44	96	.....	.....	32.35	−1.98	114	83,735	sw.	50	sw.	153	84	129	5.0	25.6
St. Louis	567	29.42	30.03	−.01	57.4	+1.6	98	66	6	49	92	45	68	34.19	−3.12	102	89,016	s.	46	sw.	156	54	126	5.1	19.7
Missouri Valley.					52.0	+2.5							69	32.90	+3.86									4.8	
Columbia, Mo.	784	29.82	30.03	.00	55.2	+1.7	97	66	2	45	95	.....	.....	40.57	+3.87	108	72,484	s.	52	sw.	142	117	107	4.8	28.4
Kansas City	963	28.98	30.02	−.02	55.9	+2.7	94	65	4	47	80	44	68	39.48	+2.04	97	114,427	s.	57	n.	156	137	73	4.4	8.3
Springfield, Mo.	1,324	28.63	30.03	.00	56.7	+1.9	93	63	4	47	89	46	74	43.32	−1.36	118	91,931	se.	48	nw.	209	84	73	3.6	24.6
Iola, Kans.	.....	28.98	30.03	+.01	57.1	+3.0	97	68	5	46	92	.....	.....	45.30	+12.92	100	68,642	s.	39	ne.	106	143	117	5.6	7.3
Topeka	.....	.....	.....	.....	55.6	+2.3	94	66	3	45	91	.....	.....	43.20	+9.38	96	83,695	s.	51	nw.	177	127	62	4.0	5.0
Lincoln	1,189	28.73	30.01	.00	52.4	+2.3	98	63	−4	42	102	40	68	35.69	+8.14	99	96,728	s.	63	sw.	148	126	92	4.8	21.6
Omaha	1,105	28.83	30.02	.00	52.3	+2.3	96	61	−3	43	99	40	69	27.10	−3.59	90	81,703	nw.	44	n.	123	101	142	5.5	21.2
Valentine	2,598	27.28	30.02	+.02	47.7	+1.4	101	61	−13	35	114	34	67	19.51	+3.55	92	98,641	nw.	52	nw.	154	167	45	4.2	24.9
Sioux City	1,135	28.79	30.01	−.01	49.1	+2.0	96	59	−10	39	106	.....	.....	26.44	+0.45	86	115,673	nw.	60	ne.	137	109	120	5.0	17.2
Pierre	1,572	28.83	30.01	−.01	48.6	+3.0	102	60	−13	37	115	33	61	19.10	+2.44	72	92,010	nw.	55	nw.	135	141	90	4.8	22.6
Huron	1,306	28.60	30.02	+.01	45.4	+3.3	99	57	−15	34	114	35	73	28.67	+7.54	91	89,921	se.	47	nw.	154	103	109	4.8	31.1
Yankton	1,233	28.67	30.00	.01	48.6	+2.0	100	60	−14	38	114	.....	.....	26.39	+0.93	84	76,329	nw.	43	nw.	117	95	154	5.8	18.5
Northern Slope.					43.7	0.0							66	18.23	+1.88									4.9	
Havre	2,505	27.32	29.98	+.01	44.0	−2.1	106	57	−19	31	125	33	72	11.92	−1.77	80	83,170	nw.	52	sw.	175	140	51	4.3	28.3
Helena	4,110	25.81	30.04	+.03	44.0	+0.8	98	54	−14	34	112	30	63	19.63	+6.83	88	61,686	sw.	49	w.	119	113	134	5.5	27.5
Kalispell	2,962	26.93	30.02	+.03	43.5	+1.1	92	54	−14	33	106	32	72	18.51	+1.53	125	41,630	w.	31	sw.	120	113	133	5.5	37.5
Cheyenne	6,088	24.00	30.00	+.03	44.7	−0.2	89	57	−14	32	103	27	56	19.09	+5.47	99	89,490	nw.	52	nw.	136	165	65	4.5	36.7
Lander	5,372	24.65	30.05	+.05	41.6	−0.5	93	56	−21	27	114	27	64	19.22	+3.50	79	30,562	sw.	42	s.	118	180	68	4.7	68.8
Sheridan, Wyo	.....	26.09	30.02	.....	43.7	.....	100	58	−20	30	120	20	66	16.98	.....	96	57,381	nw.	50	nw.	150	111	105	4.7	36.7
Yellowstone Park	6,200	23.88	30.07	+.06	38.2	−1.2	88	49	−26	27	114	26	67	19.64	−8.45	140	67,587	sw.	44	nw.	96	109	161	5.9	89.6
North Platte	2,821	27.08	30.03	+.04	50.1	+1.9	98	64	−9	36	107	36	68	19.96	+1.08	80	72,300	se.	47	nw.	192	103	71	4.0	15.3
Middle Slope.					55.0	+1.4							63	23.88	+6.08									4.9	
Denver	5,291	24.72	29.99	+.03	50.2	+0.4	92	63	−9	37	101	29	52	15.92	+1.83	77	64,961	s.	52	n.	152	174	40	4.2	39.6
Pueblo	4,685	25.28	29.97	+.02	52.2	+1.2	99	67	−8	38	107	27	47	6.14	−5.83	48	63,279	nw.	59	nw.	211	127	28	3.2	9.8
Concordia	1,398	28.54	30.02	+.01	54.5	+1.9	98	65	1	44	97	43	72	41.88	+14.37	97	65,764	s.	52	w.	107	197	62	4.9	8.2
Dodge	2,509	27.39	30.00	+.02	55.7	+2.3	101	69	−1	43	102	40	65	19.61	−1.27	80	91,069	se.	52	nw.	193	122	51	3.8	14.9
Wichita	1,358	28.60	30.04	+.03	57.2	+1.6	99	68	5	47	94	44	68	37.71	+7.05	84	93,984	s.	56	sw.	118	170	76	5.0	2.0
Oklahoma	1,214	28.72	30.00	.00	59.9	+1.2	97	70	10	50	87	48	72	52.03	+20.29	99	135,379	s.	62	sw.	119	154	93	5.0	0.5
Southern Slope.					62.3	+0.8							61	20.42	−1.95									4.2	
Abilene	1,738	28.20	30.00	+.02	64.7	+1.7	102	73	15	54	87	48	62	34.97	+10.17	77	75,080	s.	48	w.	117	159	90	5.1	.....
Amarillo	3,676	26.27	29.98	+.02	56.8	+1.7	97	70	4	44	93	40	64	19.05	−3.54	55	108,883	s.	62	sw.	267	78	19	3.3	24.4
Del Rio	944	29.00	29.99	+.03	69.2	+0.6	104	81	17	57	87	.....	.....	18.02	−8.28	65	68,905	e.	45	nw.	167	124	75	4.4	
Roswell	3,578	26.37	29.99	+.06	58.6	−0.9	101	74	12	43	89	38	58	9.62	−6.16	52	53,160	s.	42	sw.	163	142	52	4.2	2.4
Southern Plateau.					58.9	−0.6							47	12.45	−0.77									2.9	
El Paso	3,762	26.19	29.93	+.04	62.9	0.0	101	75	21	50	80	32	39	6.94	−2.91	41	100,582	w.	68	nw.	202	128	36	3.2	
Santa Fe	7,013	23.26	29.96	+.03	47.8	−1.0	86	60	−1	36	87	28	53	12.79	−1.73	85	79,086	ne.	44	nw.	212	125	29	3.2	24.0
Flagstaff	6,907	23.36	29.95	+.04	43.9	−0.8	84	58	−14	29	98	28	62	25.91	+2.88	86	68,334	sw.	58	sw.	181	98	87	4.1	69.2
Phoenix	1,108	28.76	29.91	+.03	69.1	−0.3	111	83	30	55	81	37	38	10.68	+2.78	42	37,933	e.	36	nw.	211	134	21	2.9	
Yuma	141	29.76	29.91	+.03	71.0	−1.1	114	86	28	56	86	42	43	5.93	+2.81	21	58,512	n.	40	sw.	318	29	19	1.3	
Middle Plateau.					48.6	−0.5							54	12.69	+1.17									4.1	
Reno	4,532	25.48	30.02	+.03	49.6	+0.5	100	64	−1	35	101	28	52	5.42	−5.07	50	46,001	w.	45	sw.	196	106	64	3.6	11.6
Tonopah, Nev	.....	24.08	30.04	.....	49.4	+3.4	91	59	7	40	87	24	45	5.30	−4.88	41	81,444	se.	52	nw.	182	134	41	3.6	
Winnemucca	4,344	25.64	30.05	+.04	48.2	−0.6	100	64	−5	32	105	30	58	6.42	−2.01	45	51,794	ne.	44	sw.	192	92	82	3.8	16.1
Modena	5,479	24.62	29.99	+.04	46.7	−1.8	96	61	−17	32	113	30	61	16.62	+6.44	64	90,372	w.	68	sw.	150	121	95	4.6	45.9
Salt Lake City	4,366	25.63	30.01	+.02	50.1	−1.7	95	60	6	40	89	32	56	20.85	+4.76	91	50,563	se.	40	nw.	156	127	83	4.5	48.7
Durango	6,546	23.67	30.00	+.06	45.2	−1.8	89	60	−5	30	94	26	57	24.00	+7.28	109	51,296	nw.	36	s.	138	169	59	4.4	73.1
Grand Junction	4,608	25.40	29.99	+.03	51.0	−1.5	98	64	−6	38	104	27	49	10.23	+1.70	64	45,175	nw.	42	s.	197	108	61	3.9	15.0
Northern Plateau.					50.0	+0.5							60	11.77	−3.08									5.2	
Baker City	3,471	26.47	30.08	+.04	46.2	+1.6	102	57	−4	35	106	33	64	8.61	−4.64	91	58,100	se.	32	s.	127	138	101	4.8	26.3
Boise	2,739	27.20	30.07	+.03	51.0	+0.4	104	62	5	40	99	32	55	12.33	−0.42	87	50,753	nw.	42	sw.	125	93	146	5.6	8.5
Lewiston	757	29.24	30.05	+.02	53.3	+0.1	108	64	7	42	101	.....	.....	10.91	−2.61	103	49,182	e.	56	w.	94	97	175	6.0	0.7
Pocatello	4,477	25.51	30.06	+.04	46.9	−0.7	96	58	−18	36	114	29	58	15.07	+2.10	103	74,018	se.	48	sw.	152	141	70	4.3	31.1
Spokane	1,929	27.98	30.05	+.03	48.7	+0.9	101	58	−4	39	105	33	63	12.02	−6.87	102	53,396	sw.	39	sw.	96	136	134	5.8	19.9
Walla Walla, Wash.	.....	28.98	30.06	+.02	54.2	+0.8	105	64	2	44	103	38	62	11.66	−6.05	96	52,036	s.	38	s.	143	112	111	5.0	9.2
N. Pac. Coast Region.					50.3	0.0							79	33.56	−6.43									6.2	
North Head		29.85	30.08	+.04	49.3	−0.6	79	53	26	46	53	45	87	45.02	−0.95	194	144,298	nw.	85	se.	71	103	192	6.9	
Port Crescent	211	29.79	30.08	+.07	45.8	−0.4	86	52	18	39	68	.....	.....	43.02	−0.64	162	44,375	nw.	36	sw.	59	152	155	6.4	0.6
Seattle	259	29.96	30.09	+.07	50.9	+0.1	88	58	25	44	63	44	81	28.25	−8.44	137	71,043	se.	50	s.	62	136	168	6.6	3.0
Takoma	123	29.84	30.06	+.03	50.4	0.0	90	58	23	43	67	43	79	38.21	−7.20	142	49,892	nw.	38	e.	99	106	161	6.2	2.0
Portland, Oreg.	153	29.92	30.08	+.03	52.9	+0.5	94	61	23	45	71	43	74	34.37	−10.95	151	55,431	nw.	33	s.	104	109	143	5.8	1.9
Roseburg	510	29.53	30.09	+.03	52.7	+0.1	102	64	23	41	79	43	76	24.18	−10.41	131	27,549	nw.	30	sw.	127	125	114	5.1	0.3
Mid. Pac. Coast Region.					56.9	−0.2							69	20.82	−6.57									4.0	
Eureka	62	30.03	30.10	+.03	50.7	−0.6	72	56	30	45	42	46	86	38.40	−12.89	116	63,502	n.	48	n.	125	133	108	5.2	
Mount Tamalpais	2,375	27.56	30.04	+.01	55.1	.....	94	62	31	49	65	39	63	25.13	+2.21	81	150,508	nw.	77	nw.	236	58	72	3.2	2.1
Red Bluff	332	29.64	29.99	−.00	62.2	−0.3	114	74	25	50	89	40	54	17.92	−7.24	52	50,920	nw.	40	n.	194	78	94	3.9	T.
Sacramento	69	29.93	30.00	+.01	59.7	+0.1	103	71	28	48	75	45	64	11.21	−8.97	54	71,257	s.	38	sw.	240	79	57	3.1	
San Francisco	155	29.87	30.04	+.02	55.0	+0.1	89	61	35	49	54	46	77	16.42	−5.97	70	69,916	w.	34	sw.	155	132	79	4.4	
S. Pac. Coast Region.					60.5	+0.1							67	11.17	−2.78									3.4	
Fresno	330	29.64	30.00	+.03	62.9	−0.3	114	77	29	49	85	39	54	7.08	−2.65	35	42,744	nw.	24	nw.	212	56	68	3.0	
Los Angeles	338	29.63	29.99	+.01	61.9	+1.6	96	72	37	52	59	47	68	13.74	−2.00	85	48,167	sw.	40	nw.	203	89	74	3.8	
San Diego	87	29.90	29.99	+.01	59.9	−0.7	84	66	37	54	47	50	73	8.59	−1.49	41	51,902	nw.	35	s.	277	46	43	2.9	
San Luis Obispo	201	29.82	30.04	+.02	57.2	0.0	96	69	28	46	68	45	72	15.28	−5.33	52	43,981	nw.	26	w.	204	97	65	3.8	
West Indies.																									
San Juan	82	29.91	29.99	+.01	78.5	.....	92	84	64	73	28	71	79	57.77	+3.18	216	93,979	e.	50	se.	160	151	55	4.3	

* Pressure reduced to standard gravity and to the mean of 24 hourly observations. † For the snow year, July 1, 1907, to June 30, 1908.

TABLE II.—*Total number of days with thunderstorms at selected stations, 1908.*

States and stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
Alabama.													
Anniston	1	0	3	5	13	12	18	14	3	0	1	1	71
Birmingham	0	1	2	5	11	10	18	11	1	0	1	1	61
Mobile	2	1	3	10	7	16	16	9	9	1	1	0	75
Montgomery	2	1	2	8	8	12	13	8	3	2	2	0	61
Scottsboro	2	0	0	1	3	1	6	0	0	0	0	0	13
Arizona.													
Flagstaff	0	0	0	3	2	1	21	20	7	1	0	0	55
Phoenix	0	0	0	1	1	1	16	12	4	0	1	3	39
Pinto	0	0	0	0	0	1	3	6	0	1	0	0	11
Yuma	0	0	0	0	0	0	0	2	1	0	0	0	3
Arkansas.													
Bentonville	0	4	0	7	13	14	8	10	4	2	5	0	67
Little Rock	1	4	5	7	6	6	12	11	5	0	6	0	63
Fort Smith	1	2	1	3	10	9	6	8	3	1	6	0	50
California.													
Eureka	0	1	0	0	0	0	0	0	0	1	0	0	2
Fresno	1	0	0	0	0	0	0	0	1	0	1	0	3
Independence	0	0	0	0	0	1	6	7	4	0	0	0	18
Los Angeles	1	1	0	0	0	0	0	1	3	1	0	0	7
Mount Tamalpais	0	1	0	0	0	0	0	0	0	0	0	0	1
Point Reyes Light	0	0	0	0	0	0	0	0	0	0	0	0	0
Red Bluff	0	0	0	0	2	0	0	0	0	0	0	0	2
Sacramento	0	0	1	0	0	0	0	0	1	0	0	0	2
San Diego	1	0	0	0	0	0	1	1	2	2	0	0	6
San Francisco	0	1	0	0	0	0	0	0	0	0	0	0	1
San Jose	0	0	0	0	0	0	0	0	0	0	0	0	0
San Luis Obispo	2	0	0	0	0	0	1	0	3	1	0	0	7
Southeast Farallon	0	1	0	0	0	0	0	0	0	0	0	0	1
Colorado.													
Denver	0	0	0	2	4	10	9	13	2	0	0	0	40
Durango	0	1	0	1	3	3	17	16	2	0	0	0	43
Grand Junction	0	0	0	3	2	4	7	10	2	0	0	0	28
Pueblo	0	1	1	3	4	6	18	8	1	1	0	0	43
Connecticut													
Hartford	0	0	2	2	2	2	11	6	1	0	0	0	26
New Haven	0	1	2	1	2	4	7	6	1	1	0	0	25
District of Columbia.													
Washington	2	0	1	1	6	4	11	4	2	0	0		31
Florida.													
Jacksonville	0	1	2	9	10	13	18	12	6	2	0	0	73
Jupiter	0	0	0	4	6	8	13	15	13	5	2	0	66
Key West	1	2	1	1	3	13	9	12	14	4	1	0	61
Myers	0	1	0	3	15	25	19	29	23	2	3	2	122
Pensacola	2	2	3	8	7	16	23	11	9	1	2	0	84
Sand Key	1	0	0	3	5	8	9	15	15	4	1	0	61
Tampa	1	1	0	4	6	16	13	22	9	1	0	0	73
Georgia.													
Atlanta	1	0	3	5	10	10	14	12	2	2	0	0	59
Augusta	1	0	3	6	9	9	16	9	0	1	0	0	54
Macon	3	0	3	8	7	7	11	12	1	1	0	1	54
Savannah	2	2	1	5	10	8	12	13	5	1	0	0	59
Thomasville	2	2	2	8	6	15	25	10	7	2	0	0	79
Idaho.													
Boise	0	0	0	1	1	3	6	2	4	0	0	0	17
Chesterfield	0	1	0	2	2	11	7	4	0	0	0	0	27
Lewiston	0	0	0	1	1	1	5	5	3	0	0	0	16
Murray	0	0	0	1	0	1	3	4	1	0	0	0	10
Pocatello	0	0	0	4	2	8	5	6	6	0	0	0	31
Illinois.													
Cairo	0	4	3	7	14	10	11	13	1	0	4	0	67
Chicago	0	1	5	3	7	7	8	5	3	0	2	0	41
Galva	0	0	2	2	4	6	4	3	3	0	4	0	28
La Salle	0	0	6	5	9	7	13	5	2	0	1	0	48
Peoria	0	1	5	4	13	10	12	6	1	0	2	0	54
Rantoul	0	1	6	6	11	7	7	4	2	1	2	0	47
Springfield	0	1	4	7	15	10	7	5	1	0	2	0	52
Indiana.													
Butlerville	0	1	9	2	8	5	4	1	0	0	3	0	33
Evansville	0	1	7	4	11	5	9	4	1	1	3	0	46
Indianapolis	0	1	5	3	7	6	7	4	0	1	3	0	37
Iowa.													
Charles City	0	0	2	2	11	11	4	3	1	1	0	0	35
Davenport	0	1	3	4	9	8	9	7	1	0	3	0	45
Des Moines	0	1	4	3	13	9	9	9	2	2	0	0	52
Dubuque	0	1	1	3	7	10	8	4	3	1	2	0	40
Keokuk	0	1	4	4	13	10	12	5	3	2	3	0	57
Sioux City	0	0	1	3	11	11	5	7	2	0	0	0	40
Kansas.													
Concordia	0	1	1	1	13	15	5	13	3	1	1	0	54
Dodge	0	0	0	4	7	12	7	3	2	3	0	0	38
Iola	0	2	1	3	9	11	10	7	3	3	4	0	58
Topeka	0	0	2	4	10	13	8	8	0	2	3	0	50
Wichita	0	0	0	3	10	14	8	9	5	2	2	0	53
Kentucky.													
Lexington	0	2	5	5	9	6	13	9	3	0	3	0	55
Louisville	1	2	7	5	7	7	10	6	2	0	4	0	51
Louisiana.													
New Orleans	2	4	2	5	4	10	17	11	11	0	0	0	66
Shreveport	1	3	0	7	9	9	9	7	5	0	6	0	56
Maine.													
Eastport	2	0	1	0	4	2	4	5	1	1	0	0	20
Farmington	0	0	0	0	4	2	5	2	1	0	0	0	14
Orono	0	0	0	0	4	0	5	3	0	0	0	0	12
Portland	0	0	1	0	5	0	6	4	1	0	0	0	17
Maryland.													
Baltimore	1	0	3	1	6	1	13	3	2	1	0	0	31
Grantsville	0	0	1	0	5	2	6	2	0	0	0	0	16
Princess Anne	0	0	0	2	3	3	9	5	2	1	0	0	25
Massachusetts.													
Boston	0	0	1	3	0	4	5	4	0	0	0	0	17
Nantucket	2	1	2	2	0	1	7	3	0	1	2	0	21

TABLE II.—*Total number of days with thunderstorms, etc.*—Continued.

States and stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
Massachusetts—Con.													
Michigan.													
Alpena	0	0	2	3	7	5	5	2	2	0	2	0	28
Detroit	0	0	4	6	10	5	7	4	0	1	2	0	39
Escanaba	0	0	1	1	0	4	4	4	4	0	1	0	19
Grand Haven	0	0	1	5	8	4	8	5	1	0	3	0	35
Grand Rapids	0	0	1	6	7	5	6	5	1	0	1	0	32
Houghton	0	0	0	1	1	5	5	4	4	0	1	0	21
Marquette	0	0	1	1	2	6	4	3	3	1	1	0	22
Port Huron	0	0	2	2	5	8	4	5	0	1	2	0	29
Sault Sainte Marie	0	0	1	2	1	4	5	2	4	0	0	0	19
Minnesota.													
Collegeville	0	0	0	2	3	7	4	1	5	0	0	0	22
Duluth	0	0	0	0	5	9	7	3	6	0	0	0	30
Minneapolis	0	0	1	2	8	9	6	4	6	1	1	0	38
Moorhead	0	0	0	1	3	7	8	5	3	0	0	0	27
St. Paul	0	0	0	1	7	9	5	2	5	0	0	0	29
Mississippi.													
Meridian	1	2	1	5	6	9	14	9	5	0	1	0	53
Vicksburg	1	4	1	9	6	13	12	11	7	1	3	1	69
Missouri.													
Columbia	0	0	4	6	7	14	8	8	4	0	7	0	58
Hannibal	0	2	6	6	15	10	9	7	2	1	4	0	61
Kansas City	0	1	2	6	11	14	10	7	0	4	5	0	60
St. Louis	0	1	3	5	14	9	9	5	3	0	1	0	50
Springfield	0	3	3	6	9	12	5	9	2	0	4	0	53
Montana.													
Havre	0	0	0	1	3	9	5	7	5	0	0	0	30
Helena	0	0	0	2	3	8	6	4	6	0	0	0	29
Kalispell	0	0	0	0	3	3	6	3	2	0	0	0	17
Miles City	0	0	0	0	5	7	3	5	4	1	0	0	25
Ovando	0	0	0	0	0	0	0	0	0	0	0	0	0
Renova	0	0	1	1	1	0	1	2	1	0	0	0	7
Nebraska.													
Lincoln	0	0	2	5	11	15	6	13	3	1	0	0	56
North Platte	0	0	0	3	6	14	10	12	2	1	0	0	48
Omaha	0	0	2	4	14	14	8	10	0	1	1	0	54
Valentine	0	0	0	2	8	12	10	14	1	1	0	0	48
Nevada.													
Reno	0	0	0	1	0	4	7	4	2	0	0	0	18
Tonopah	0	0	0	0	0	0	8	5	4	0	0	0	17
Winnemucca	0	0	0	0	1	2	5	2	5	0	1	0	16
New Hampshire.													
Concord	0	0	1	2	4	3	3	5	0	0	0	0	18
Nashua	0	0	2	3	4	3	2	4	1	0	0	0	19
New Jersey.													
Atlantic City	0	0	1	3	3	3	7	2	2	1	0	0	22
Cape May	0	0	0	3	3	3	7	3	1	1	0	0	21
Somerville	1	0	2	1	5	4	11	4	3	2	0	0	33
New Mexico.													
Albert	0	0	0	3	2	0	1	3	1	0	0	0	10
Fort Wingate	0	0	0	0	0	1	4	13	1	0	0	0	19
Roswell	0	1	0	4	2	4	11	9	2	0	0	0	33
Santa Fe	0	1	2	5	6	6	31	18	5	1	0	0	75
New York.													
Albany	0	0	1	4	3	5	9	7	1	1	0	0	31
Binghamton	0	0	2	3	5	4	10	5	2	3	0	0	34
Buffalo	0	1	3	1	6	4	8	6	3	1	0	0	33
Canton	0	0	2	2	6	3	5	5	2	0	1	0	26
New York	0	0	2	1	3	4	9	4	2	0	0	0	25
Oswego	0	0	4	1	6	6	5	6	3	1	0	0	31
Rochester	0	0	3	1	6	5	7	5	3	1	0	0	31
South Canisteo	0	0	1	3	6	5	8	7	1	1	0	0	32
Syracuse	0	0	4	1	6	6	8	7	3	1	0	0	36
North Carolina.													
Asheville	1	1	2	2	11	9	14	14	0	2	0	0	56
Brewers	1	0	1	2	6	6	12	10	0	1	1	1	41
Charlotte	1	0	3	3	5	7	14	14	1	1	0	0	49
Hatteras	1	1	3	3	4	7	3	9	1	2	0	0	34
Raleigh	0	0	3	3	4	7	13	7	2	0	1	1	41
Wilmington	0	0	4	6	9	9	8	12	3	1	0	0	52
North Dakota.													
Bismarck	0	0	0	1	2	4	4	8	2	2	0	0	23
Devils Lake	0	0	0	0	4	7	8	9	2	0	0	0	30
Fullerton	0	0	0	2	4	4	6	5	3	1	0	0	25
Williston	0	0	0	1	4	7	4	5	2	0	0	0	23
Ohio.													
Cincinnati	0	1	4	2	7	6	10	3	1	0	0	0	34
Cleveland	0	0	3	4	8	8	8	7	3	1	0	0	42
Columbus	0	1	7	2	7	6	11	4	1	0	0	0	39
Sandusky	0	0	5	11	7	10	6	3	0	0	1	0	46
Toledo	0	0	4	3	11	6	8	8	0	0	1	0	41
Oklahoma.													
Hobart	0	1	0	0	8	9	9	2	4	8	2	0	43
Oklahoma	0	3	1	9	10	13	6	9	4	5	1	0	61
Pawhuska	0	1	2	5	12	15	6	3	11	5	0	0	60
Oregon.													
Ashland	0	0	0	0	0	1	1	1	0	0	0	0	3
Astoria	0	0	0	0	0	0	0	0	0	0	0	0	0
Baker City	0	0	0	2	1	4	5	4	6	0	0	0	22
Portland	0	0	0	0	0	0	0	0	1	0	0	0	1
Roseburg	0	0	0	0	0	0	1	0	0	0	0	0	1
Pennsylvania.													
Erie	1	0	4	3	8	6	6	3	4	0	1	1	36
Harrisburg	1	0	3	2	6	5	12	5	1	2	0	0	37
Philadelphia	1	0	2	2	3	2	10	4	1	0	0	0	25
Pittsburg	2	0	4	3	9	9	14	7	1	0	0	0	49
Scranton	0	0	4	2	1	4	9	5	1	3	0	0	29
Wellsboro	0	0	5	1	8	5	9	5	1	1	1	0	36
Rhode Island.													
Block Island	0	0	4	0	0	4	5	1	0	0	1	0	15
Narragansett	0	0	2	0	0	4	5	3	0	0	0	0	14
Providence	0	0	1	2	0	4	6	6	0	0	0	0	20
South Carolina.													
Charleston	1	2	1	6	9	11	8	12	3	1	3	1	52

TABLE II.—*Total number of days with thunderstorms, etc.*—Continued.

States and stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
South Carolina—Con.													
Columbia	3	0	2	5	7	11	11	10	4	0	0	0	53
South Dakota.													
Huron	0	0	1	2	4	11	7	7	3	1	0	0	36
Pierre	0	0	1	2	4	9	11	9	0	1	0	0	37
Rapid City	0	0	0	1	1	6	9	7	3	1	0	0	28
Yankton	0	0	1	3	8	12	8	5	0	1	0	0	38
Tennessee.													
Chattanooga	2	1	3	3	7	10	18	13	5	0	2	0	64
Knoxville	1	0	5	2	8	6	14	9	2	1	3	0	51
Memphis	1	2	4	7	7	8	12	8	3	1	5	1	59
Nashville	0	2	2	4	8	7	12	8	3	0	3	0	49
Texas.													
Abilene	0	0	1	6	6	3	11	3	2	3	3	0	38
Amarillo	0	0	0	3	5	9	6	8	1	1	1	0	34
Corpus Christi	0	1	2	4	2	11	8	7	1	2	1	1	41
Del Rio	0	0	0	4	1	1	6	4	3	1	1	1	22
El Paso	0	0	1	2	1	1	10	13	0	0	0	0	28
Fort Worth	1	4	3	10	13	5	12	6	9	4	1	0	68
Galveston	0	6	1	5	2	5	16	8	7	0	1	1	52
Palestine	1	3	1	11	8	6	15	8	6	1	4	2	66
San Antonio	0	3	3	6	7	3	14	9	5	4	1	2	57
Taylor	1	5	2	4	9	4	10	8	6	3	2	2	56
Utah.													
Levan	0	0	0	0	4	6	8	9	4	0	0	0	31
Modena	0	0	0	0	1	2	14	13	3	0	0	0	33
Salt Lake City	0	0	0	3	2	7	6	10	5	0	0	0	33
Vermont.													
Burlington	0	0	1	2	6	6	4	5	0	0	0	0	24
Northfield	0	0	1	2	2	5	5	4	0	1	0	0	20
Jacksonville	0	0	2	1	1	1	10	5	1	2	0	0	23
Virginia.													
Cape Henry	0	0	2	3	9	3	5	6	2	0	1	1	32
Dale Enterprise	0	0	0	1	13	9	9	9	1	1	0	0	43
Lynchburg	0	0	1	3	5	7	7	6	0	0	0	0	29
Mount Weather	0	0	2	1	8	9	12	8	2	1	0	0	43
Norfolk	0	0	2	4	9	3	9	5	1	0	1	0	34
Richmond	0	0	0	4	6	4	12	6	1	1	0	0	34
Wytheville	1	0	1	1	2	7	9	1	1	0	0	1	24
Washington.													
North Head	0	0	0	0	0	0	0	0	0	0	1	0	1
Port Crescent	0	0	0	0	0	0	1	2	0	0	0	1	4
Seattle	0	0	2	0	1	1	2	2	0	0	0	0	8
Spokane	0	0	0	2	1	3	2	1	1	1	0	0	11
Tacoma	1	1	0	0	0	1	2	1	0	0	0	0	6
Tatoosh Island	0	0	0	0	0	0	0	1	0	0	0	0	1
Walla Walla	0	0	0	2	0	0	2	2	1	0	0	0	7
West Virginia.													
Elkins	1	0	4	1	14	8	14	4	3	0	0	0	49
Parkersburg	1	0	9	3	10	7	11	6	1	2	0	0	50
Upper Tract	0	0	0	0	8	5	13	2	1	0	0	0	29
Wisconsin.													
Green Bay	0	0	0	2	3	5	5	6	3	0	2	0	26
La Crosse	0	1	1	2	10	8	8	5	3	1	1	0	40
Madison	0	0	2	2	8	9	8	4	1	0	1	0	35
Milwaukee	0	0	2	5	6	8	5	4	0	1	1	0	32
Wyoming.													
Cheyenne	0	0	0	2	9	13	15	10	1	1	0	0	51
Griggs	0	0	0	1	5	11	5	8	1	0	0	0	31
Lander	0	0	0	2	0	7	2	5	4	0	0	0	20
Sheridan	0	0	0	2	5	9	5	5	3	0	0	0	29
Yellowstone Park	0	0	0	2	5	10	6	5	3	0	0	0	31

TABLE III.—*Annual climatological summary, Canadian stations, 1908.*

Stations.	Pressure.*			Temperature.				Precipitation.		Total depth of snowfall.†
	Mean not reduced.	Mean reduced.	Departure from normal.	Mean.	Departure from normal.	Mean maximum	Mean minimum.	Total.	Departure from normal.	
	Ins.	*Ins.*	*Ins.*	°	°	°	°	*Ins.*	*Ins.*	*Ins.*
St. Johns, N. F	29.74	29.88	—.03	41.4	+0.9	48.3	34.4	44.16	—10.47	.....
Sydney, C. B. I	29.91	29.95	+.01	43.3	+2.0	51.9	34.7	54.63	+ 4.35	80.0
Halifax, N. S	29.87	29.98	—.01	44.2	+5.1	53.1	35.4	55.95	— 1.08	62.8
Grand Manan, N. B	29.90	29.95	—.02	43.6	+0.8	50.5	36.8	40.81	— 6.44	31.8
Yarmouth, N. S	29.92	29.99	—.01	43.8	+0.6	51.2	36.4	45.65	— 4.68	53.2
Charlottetown, P. E. I	29.89	29.93	—.01	42.4	+1.4	49.8	34.9	42.40	+ 0.78	93.5
Chatham, N. B	29.90	29.92	—.02	41.3	+2.5	51.8	30.8	43.73	+ 2.44	81.0
Father Point, Que	29.89	29.91	—.02	35.8	+1.0	43.4	28.2	36.66	+ 3.67	96.8
Quebec, Que	29.63	29.96	—.02	39.4	+1.2	47.9	30.8	46.74	+ 5.02	161.5
Montreal, Que	.....	.....	.....	42.8	+1.3	.....	.....	42.98	+ 1.99	150.5
Rockliffe, Ont	29.37	29.94	.00	37.5	—0.7	49.1	25.9	24.26	— 6.20	.....
Ottawa, Ont	29.72	30.05	+.05	41.8	+1.2	51.4	32.3	32.98	+ 0.38	125.8
Kingston, Ont	29.71	30.03	+.02	44.0	+0.9	51.9	36.2	33.85	+ 1.04	57.1
Toronto, Ont	29.63	30.01	—.01	46.8	+2.6	55.8	37.7	29.62	+ 0.13	78.1
White River, Ont	.....	.....	.....	30.9	—1.2	.....	.....	30.71	+ 5.92	.....
Port Stanley, Ont	29.38	30.02	—.01	45.9	+1.2	54.4	37.4	28.89	— 5.53	64.8
Southampton, Ont	29.29	.....	.....	45.1	+2.7	53.7	36.5	27.83	— 6.38	.....
Parry Sound, Ont	29.30	30.00	.00	42.8	+2.6	53.0	32.7	40.23	+ 1.96	151.0
Port Arthur, Ont	29.25	29.97	—.03	36.5	+2.1	44.8	28.2	24.55	— 0.21	25.1
Winnipeg, Man	29.13	29.98	—.02	37.6	+4.5	48.0	27.1	21.44	+ 0.46	52.8
Minnedosa, Man	28.12	29.97	—.03	36.2	+4.6	47.4	25.0	16.76	+ 0.31	28.5
Qu'Appelle, Assin	.....	.....	.....	36.3	+3.0	.....	.....	17.73	+ 1.65	43.9
Medicine Hat, Alberta	.....	.....	.....	44.7	+4.4	.....	.....	10.22	— 3.58	12.0
Swift Current, Sask	27.38	29.98	—.01	39.8	+2.3	50.9	28.6	12.60	— 2.87	48.4

TABLE III.—*Annual climatological summary*—Continued.

Stations.	Pressure.*			Temperature.				Precipitation.		Total depth of snowfall.†
	Mean not reduced.	Mean reduced.	Departure from normal.	Mean.	Departure from normal.	Mean maximum.	Mean minimum.	Total.	Departure from normal.	
	Ins.	*Ins.*	*Ins.*	°	°	°	°	*Ins.*	*Ins.*	*Ins.*
Calgary, Alberta	26.35	29.90	—.03	40.7	+3.5	53.1	28.3	20.68	+ 5.81	26.1
Banff, Alberta	25.24	29.97	+.04	36.8	+2.1	47.2	26.5	21.09	— 0.82	70.7
Edmonton, Alberta	.....	.....	.....	38.4	+2.8	.....	.....	17.88	+ 2.05	28.5
Prince Albert, Sask	.....	.....	.....	34.4	+3.9	.....	.....	20.26	+ 5.35	.....
Battleford, Sask	28.18	29.95	—.02	35.2	+2.5	46.6	23.8	15.72	+ 1.79	34.8
Kamloops, B. C	.....	.....	.....	46.5	—0.6	55.8	37.2	7.50	— 4.13	00.0
Victoria, B. C	29.95	30.05	+.05	50.0	+1.4	56.6	43.3	26.78	—11.36	00.0
Barkerville, B. C	25.63	29.96	+.06	37.2	+1.0	46.5	28.0	49.53	+15.97	.....
Hamilton, Bermuda	29.98	30.14	+.05	69.0	—0.7	74.5	63.5	53.66	— 8.25	00.0

* Pressure reduced to standard gravity and to the mean of 24 hourly observations. † For the snow year, July 1, 1907, to June 30, 1908.

TABLE IV.—*Heights of rivers referred to zeros of gages, 1908.*

Stations.	Highest water.		Lowest water.		Annual range.
	Stage.	Date.	Stage.	Date.	
Milk River.	*Feet.*		*Feet.*		*Feet.*
Havre, Mont. (110)	16.8	June 9	3.6	Sept. 23, 24, Oct. 24-26	12.7
James River.					
Huron, S. Dak. (83)	6.5	Mar. 18	—0.2	Sept. 16-18, Oct. 3-4	6.7
Republican River.					
Clay Center, Kans. (7)	21.6	June 6	5.1	Jan. 13	16.5
Smoky Hill-Kansas River.					
Abilene, Kans	24.0	June 11	0.0	*	24.0
Manhattan, Kans. (7)	24.8	June 8	2.4	*	22.4
Topeka, Kans	28.0	June 9	5.6	*	22.4
Missouri River.					
Bismarck, N. Dak. (96)	15.1	June 19	1.3	Nov. 15	13.8
Pierre, S. Dak. (76)	11.4	June 22	—0.5	Dec. 1	11.9
Sioux City, Iowa (2)	15.2	June 23	2.9	Jan. 6-8	12.3
Blair, Nebr	15.9	June 26	2.3	Jan. 1-3	13.6
Omaha, Nebr. (a) (82)	19.1	June 25, 26	6.1	Feb. 1	13.0
St. Joseph, Mo	14.9	June 14, 15	—2.6	Jan. 20	17.5
Kansas City, Mo. (6)	30.2	June 15	3.6	Jan. 19	26.6
Glasgow, Mo	27.2	June 18	4.3	Feb. 5	22.9
Boonville, Mo	28.2	June 18	5.4	Jan. 21, 22	22.8
Hermann, Mo	25.0	June 20	4.0	Feb. 4, 5	21.0
Minnesota River.					
Mankato, Minn	21.2	June 26	1.6	Jan. 6	19.6
St. Croix River.					
Stillwater, Minn. (124)	14.8	July 1	2.2	Sept. 18-20	12.6
Red Cedar River.					
Cedar Rapids, Iowa	8.6	May 30	2.8	Sept. 26	5.8
Des Moines River					
Des Moines, Iowa (b) (10)	14.8	June 25	1.9	Oct. 8-23	12.9
Illinois River.					
La Salle, Ill. (9)	28.8	Mar. 8	11.4	*	17.4
Peoria, Ill	22.2	Mar. 10	7.5	Oct. 16	14.7
Clarion River.					
Clarion, Pa	12.0	Feb. 15	—1.2	Oct. 27, 28	13.2
Conemaugh River.					
Johnstown, Pa. (7)	16.7	Mar. 19	0.3	*	16.4
Allegheny River.					
Warren, Pa.	12.2	Feb. 15	—0.9	Nov. 27-30	13.1
Franklin, Pa	16.4	Feb. 16	—0.6	*	17.0
Parker, Pa	17.5	Feb. 16	—0.5	*	18.0
Freeport, Pa	28.4	Feb. 16	0.2	Sept. 21, 22, 25-28	28.2
Springdale, Pa	33.0	Feb. 16	5.0	Sept. 23	28.0
Cheat River.					
Rowlesburg, W. Va. (23)	11.0	Feb. 15	—0.8	Oct. 26	11.8
Youghiogheny River.					
Confluence, Pa. (40)	9.0	Mar. 9	—0.7	*	9.7
West Newton, Pa. (15)	16.5	Feb. 16	—0.2	*	16.7
Monongahela River.					
Weston, W. Va	10.6	Feb. 15	—3.5	Nov. 24-Dec. 11	14.1
Fairmont, W. Va	23.1	Mar. 9	9.9	Oct. 29-Nov. 11	13.2
Greensboro, Pa. (2)	22.0	Feb. 16	5.2	Oct. 14	16.8
Lock No. 4, Pa	28.5	Feb. 16	6.7	July 4, 5	21.8
Muskingum River.					
Zanesville, Ohio	26.3	Mar. 4	7.5	Oct. 4	18.8
Beverly, Ohio	24.7	Mar. 6	3.5	Sept. 4	21.2
Little Kanawha River.					
Glenville, W. Va	15.0	May 10	—3.4	Nov. 10	18.4
Creston, W. Va	16.2	Mar. 10	—1.9	Nov. 21-27	18.1
New-Great Kanawha River.					
Radford, Va	7.2	Jan. 13	0.2	Sept. 27, 28	7.0
Hinton, W. Va	12.0	Jan. 13, Feb. 16	1.2	*	10.8
Charleston, W. Va	29.9	Apr. 2	4.1	Nov. 5	25.8
Scioto River.					
Columbus, Ohio (5)	18.5	Feb. 15	1.6	*	16.9
Licking River.					
Falmouth, Ky	30.0	Apr. 1, 2	0.0	Sept. 19, 20, Oct. 20-23	30.0
Miami River.					
Dayton, Ohio (7)	13.3	Mar. 3	0.4	Oct. 16, 17	12.9
Kentucky River.					
Beattyville, Ky	30.0	Apr. 2	—0.4	Oct. 2-7	30.4
High Bridge, Ky	27.3	Apr. 2	8.4	Nov. 1-4	18.9
Frankfort, Ky	30.0	Apr. 2	3.2	Nov. 1-7	26.8

TABLE IV.—*Heights of rivers referred to zeros of gages, 1908*—Continued.

Stations.	Highest water. Stage.	Highest water. Date.	Lowest water. Stage.	Lowest water. Date.	Annual range.
	Feet.		*Feet.*		*Feet.*
Wabash River.					
Mount Carmel, Ill.	24.9	May 13	0.3	Sept. 12	24.6
Cumberland River.					
Burnside, Ky	25.4	Feb. 16	—1.0	Oct. 6-9	26.4
Celina, Tenn	25.0	Apr. 4	0.3	Oct. 8, 9, Nov. 6-10	24.7
Carthage, Tenn	24.5	Feb. 17	—0.1	Oct. 11-13, Nov. 3-5	24.6
Nashville, Tenn	29.4	Feb. 16	6.5	Oct. 9	22.9
Clarksville, Tenn	34.7	Feb. 20	0.0	Oct. 12-Nov. 10	34.7
Powell River.					
Tazewell, Tenn	10.2	Feb. 16	0.2	Oct. 6-10	10.0
Clinch River.					
Speers Ferry, Va	13.0	Apr. 2	—0.2	Sept. 28, Oct. 8	13.2
Clinton, Tenn	21.6	Apr. 4	2.0	Oct. 5-8	19.6
South Fork of Holston River.					
Bluff City, Tenn	8.9	Jan. 12	0.2	*	8.7
Holston River.					
Rogersville, Tenn	12.7	Apr. 3	1.4	Sept. 26-28, Oct. 5-9, 18-22	11.3
French Broad River.					
Asheville, N. C.	5.9	Jan. 12, Feb. 15	—0.4	Oct. 8	6.3
Little Tennessee River.					
McGhee, Tenn	11.0	Feb. 16	2.4	Sept. 27, 28	8.6
Hiwassee River.					
Charleston, Tenn	15.6	Feb. 16	0.2	Oct. 8, 22	15.4
Tennessee River.					
Knoxville, Tenn	16.9	Jan. 13	0.3	Sept. 19-28, Oct. 9	16.6
Loudon, Tenn	13.0	Jan. 14; Feb. 16, 17	0.7	Oct. 5-10	12.3
Kingston, Tenn	15.4	Feb. 16	1.2	Sept. 26-Oct. 9	14.2
Chattanooga, Tenn	24.8	Feb. 18	1.3	Oct. 7, 8	23.5
Bridgeport, Ala	19.9	Feb. 17	0.3	Oct. 1, 2, 8	19.6
Guntersville, Ala	27.1	Feb. 19	1.5	Oct. 3, 4, 7, 8, 11, 12, 25, 26	25.6
Florence, Ala	17.0	Feb. 19, 20	—0.1	Oct. 2, 4-7, 27, 28	17.1
Riverton, Ala	34.8	Feb. 20	7.4	Oct. 28	27.4
Johnsonville, Tenn	27.1	Feb. 22	0.7	Oct. 30	26.4
Ohio River.					
Pittsburg, Pa	30.0	Feb. 16	1.9	June 10	28.1
Davis Island Dam, Pa.	29.1	Feb. 16	4.7	Feb. 2, July 7	24.4
Beaver Dam, Pa.	41.3	Feb. 16	0.8	Sept. 27, 28, 30, Oct. 4	40.5
Wheeling, W. Va.	42.8	Feb. 17	0.0	Sept. 30-Oct. 9	42.8
Parkersburg, W. Va.	41.2	Feb. 18	—0.3	Oct. 7-10	41.5
Point Pleasant, W. Va.	45.7	Feb. 19	0.2	Oct. 2	45.5
Catlettsburg, Ky	52.9	Apr. 3	2.3	Oct. 22, Dec. 3	50.6
Portsmouth, Ohio	54.0	Apr. 3	1.4	Oct. 4, 5	52.6
Maysville, Ky	52.6	Apr. 4	2.2	Oct. 6	50.4
Cincinnati, Ohio	55.9	Apr. 4	2.8	Oct. 5-7	53.1
Madison, Ind	48.1	Apr. 5	2.5	Oct. 8, 9	45.6
Louisville, Ky	31.3	Apr. 5, 6	2.2	Dec. 4	29.1
Evansville, Ind	42.2	Apr. 8, 9	1.3	Oct. 11-16	40.9
Mount Vernon, Ind.	41.9	Mar. 16	1.3	Nov. 1-3	40.6
Paducah, Ky	40.9	Feb. 26	1.1	Nov. 1	39.8
Cairo, Ill.	45.6	Mar. 18	4.3	Oct. 17-19	41.3
St. Francis River.					
Marked Tree, Ark.	18.1	Mar. 10-12	0.8	Oct. 22-Nov. 10	17.3
Neosho River.					
Neosho Rapids, Kans	26.3	June 14	0.6	Jan. 27	25.7
Iola, Kans.	12.5	June 19	—2.8	Oct. 19, 20	15.3
Oswego, Kans.	21.7	Dec. 1	0.1	Oct. 18-20	21.6
Fort Gibson, Okla.	35.0	May 25	8.6	Sept. 4, 5	26.4
Canadian River.					
Calvin, Okla.	17.2	May 24	2.7	*	14.5
Black River.					
Blackrock, Ark	23.4	May 7	2.0	Oct. 21-Nov. 23	21.4
White River.					
Calicorock, Ark.	29.1	May 15	—0.4	*	29.5
Batesville, Ark	28.2	May 16	1.5	*	26.7
Clarendon, Ark	30.7	May 25	7.1	Nov. 22	23.6
Arkansas River.					
Wichita, Kans	4.4	Oct. 25	—2.3	Oct. 11, 14-22	6.7
Tulsa, Okla.	17.7	May 25	2.4	Aug. 13-19, 24	15.3
Webbers Falls, Okla.	31.0	May 26	4.6	Oct. 18-20	26.4
Dardanelle, Ark.	27.6	May 29	2.4	Feb. 12	25.2
Little Rock, Ark.	26.3	June 16, 17	3.4	Oct. 23	22.9
Yazoo River.					
Greenwood, Miss.	32.7	Feb. 26, 27	0.6	Nov. 1, 2	32.1
Yazoo City, Miss.	26.0	Mar. 24	—2.6	Nov. 8-17	28.6
Ouachita River.					
Camden, Ark.	36.6	May 19	3.4	Sept. 11	33.2
Monroe, La. (*e*)	35.6	May 22-25	—1.5	Nov. 1-10	37.1
Red River.					
Denison, Tex. (*d*)	32.5	May 26			
Arthur City, Tex	43.2	May 28	6.3	Sept. 17	36.9
Fulton, Ark.	34.1	June 2	8.7	Nov. 21-28	25.4
Shreveport, La.	35.2	June 15	—0.5	Oct. 21, 22	35.7
Alexandria, La	41.8	July 6	2.9	Sept. 24, 25, Oct. 25, 26	38.9
Mississippi River.					
Fort Ripley, Minn. (116)	11.0	June 11	3.0	Dec. 1	8.0
St. Paul, Minn. (105)	16.8	June 29	1.6	Dec. 4	15.2
Red Wing, Minn. (100)	11.6	July 1, 2	1.1	Nov. 18-21	10.5
Reeds Landing, Minn. (16)	10.8	July 1, 2	—0.5	Feb. 4-9	10.8
La Crosse, Wis. (94)	11.7	July 4	1.9	Sept. 23-26	9.8
Prairie du Chien, Wis. (106)	13.7	June 21; July 7, 8	2.0	Sept. 23-26	11.7
Dubuque, Iowa (34)	14.9	July 19	1.2	Dec. 7	13.7
Clinton, Iowa (*e*)	13.9	July 20			
Leclaire, Iowa (61)	8.6	July 20	0.0	Jan. 3	8.6
Davenport, Iowa (4)	12.2	July 20, 21	0.8	Dec. 9	11.4
Muscatine, Iowa	13.5	July 21, 22	1.5	Dec. 10	12.0
Galland, Iowa.	7.4	June 9	0.5	Jan. 11-13, 27, Dec. 11	6.9
Keokuk, Iowa	15.0	May 29	—0.9	Jan. 19	15.9
Warsaw, Ill.	18.4	May 29	2.8	Jan. 10, 11	15.6
Hannibal, Mo. (11)	17.6	June 1	0.6	Jan. 19, 20	17.0
Grafton, Ill.	23.8	June 18, 19	3.0	Dec. 16	20.8

TABLE IV.—*Heights of rivers referred to zeros of gages, 1908*—Continued.

Stations.	Highest water. Stage.	Highest water. Date.	Lowest water. Stage.	Lowest water. Date.	Annual range.
	Feet.		*Feet.*		*Feet.*
Mississippi River—Cont'd.					
St. Louis, Mo.	34.9	June 20, 21	1.7	Feb. 4	33.2
Chester, Ill.	30.7	June 20-23	3.6	Dec. 26	27.1
New Madrid, Mo.	36.6	Mar. 20, 21	3.7	Oct. 18-20, 27, 28	32.9
Memphis, Tenn	35.6	Mar. 25-25	3.5	Oct. 30, 31	32.1
Helena, Ark	45.2	Mar. 26, 27	3.9	Oct. 30, 31, Nov. 1	41.3
Arkansas City, Ark	49.9	June 2-4	3.4	Oct. 24, 25	46.5
Greenville, Miss	44.7	June 2-5	2.3	Oct. 25, 26	42.4
Vicksburg, Miss	47.9	June 6-10	2.0	Oct. 25-28	45.9
Natchez, Miss.	48.9	June 14	4.9	Oct. 28, 29	44.0
Baton Rouge, La	39.6	June 15-17	3.5	Oct. 30, 31	36.1
Donaldsonville, La.	31.6	June 16, 18, 19	3.0	Nov. 23, Dec. 4	28.6
New Orleans, La.	20.0	June 19, 22	3.3	Nov. 22, Dec. 4	16.7
Atchafalaya River.					
Simmesport, La.	45.2	June 19	0.4	Oct. 31	44.8
Melville, La.	39.7	June 22, 23	5.0	Oct. 29, 30	34.7
Morgan City, La. (*f*)	6.0	June 19	1.5	Jan. 14	4.5
Grand River.					
Grand Rapids, Mich.	15.2	Mar. 16	1.6	Oct. 18	13.6
Maumee River.					
Tiffin, Ohio	7.2	Mar. 4	—0.3	Nov. 11-15	7.5
Connecticut River.					
Hartford, Conn.	18.5	Feb. 18	0.2	Nov. 23	18.3
Mohawk River.					
Utica, N. Y.	13.4	Feb. 16	0.6	Sept. 19-28, Oct. 26, 27	12.8
Tribes Hill, N. Y.	8.0	Feb. 16	—0.5	*	8.5
Schenectady, N. Y.	9.5	Feb. 16; Mar. 30	0.2	July 3, 4	9.3
Hudson River.					
Glens Falls, N. Y. (*g*)	8.4	May 3	2.9	Aug. 31	5.5
Troy, N. Y.	18.2	Feb. 16	1.4	Nov. 5	16.8
Albany, N. Y.	16.7	Feb. 16	0.3	Nov. 2, Dec. 3	16.4
Pompton River.					
Pompton Plains, N. J.	6.9	Feb. 16	3.3	Sept. 26-28, Dec. 15-17	3.6
Passaic River.					
Chatham, N. J. (53)	6.0	Feb. 28	2.1	*	3.9
Lehigh River.					
Mauch Chunk, Pa. (49)	8.5	Feb. 16	3.5	Dec. 5	5.0
Schuylkill River.					
Reading, Pa.	6.6	Feb. 27	0.3	June 10-15, 22-24	6.3
Delaware River.					
Hancock, N. Y. (E. Br.)	10.7	Feb. 16	2.3	Sept. 18-23, 26-28	8.4
Hancock, N. Y. (W. Br.)	10.3	Feb. 16	2.2	*	8.1
Port Jervis, N. Y.	13.5	Feb. 16	0.9	Aug. 18	12.6
Phillipsburg, N. J. (76)	14.2	Feb. 16	—0.3	Sept. 20-28	14.5
Trenton, N. J.	10.0	Feb. 16, 17	0.1	Sept. 24-28	9.9
North Br. Susquehanna River.					
Towanda, Pa.	14.5	Feb. 16	0.0	Sept. 21-28	14.5
Wilkes-Barre, Pa	21.8	Feb. 17	2.0	Sept. 17 28	19.8
West Br. Susquehanna.					
Renovo, Pa. (29)	13.4	Feb. 16; Mar. 20	—0.7	Dec. 6	14.1
Williamsport, Pa.	17.4	Mar. 20	0.2	Sept. 13-28	17.2
Juniata River.					
Huntingdon, Pa.	13.6	Mar. 19	2.4	Nov. 21	11.2
Susquehanna River.					
Harrisburg, Pa.	16.0	Mar. 20	0.2	Sept. 19-28	15.8
Shenandoah River.					
Riverton, Va.	18.0	Jan. 13	—1.3	Sept. 23-28	19.3
Potomac River.					
Cumberland, Md.	9.6	Mar. 9	1.6	Sept. 11-30, Oct. 1-25	8.0
Harpers Ferry, W. Va.	19.9	Jan. 13	—1.2	Sept. 23-27	21.1
James River.					
Buchanan, Va	18.4	Jan. 12	2.0	Sept. 25-28, Oct. 8, 9	16.4
Lynchburg, Va.	16.2	Jan. 13	0.4	Oct. 15-23	15.8
Columbia, Va.	26.1	Feb. 16	3.2	Aug. 23-25	22.9
Richmond, Va	13.9	Feb. 17	—0.2	Apr. 12, Oct. 21-23	14.1
Dan River.					
Danville, Va.	9.5	Aug. 26	—0.2	*	9.7
Staunton River.					
Randolph, Va. (*h*)	24.8	Jan. 9	4.3	Aug. 4	20.5
Roanoke River.					
Clarksville, Va	13.6	Aug. 26	—0.1	Aug. 20, Oct. 10	13.7
Weldon, N. C.	45.4	Aug. 28	10.1	July 22	35.3
Tar River.					
Tarboro, N. C.	28.0	Sept. 1	1.7	July 26	26.3
Greenville, N. C.	19.4	Sept. 2	3.3	July 27	16.1
Haw River.					
Moncure, N. C.	34.3	Aug. 26	1.3	Sept. 21-23	33.0
Cape Fear River.					
Fayetteville, N. C	68.7	Aug. 29	3.0	July 19	65.7
Waccamaw River.					
Conway, S. C.	10.2	Sept. 10	1.9	June 26	8.3
Pedee River.					
Cheraw, S. C. (*i*)	44.3	Aug. 27	1.6	Oct. 9	42.7
Smiths Mills, S. C.	24.0	Sept. 3, 4	3.0	Aug. 19	21.0
Lynch Creek.					
Effingham, S. C.	20.0	Aug. 30	3.1	July 24	16.9
Black River.					
Kingstree, S. C.	10.0	Jan. 15-17, 19-21; Feb. 18, 19	0.0	Oct. 18-22	10.0
Catawba-Wateree River.					
Mount Holly, N. C.	14.2	Aug. 26	1.8	*	12.4
Catawba, S. C.	28.4	Aug. 25	1.3	Oct. 4	27.1
Camden, S. C.	39.7	Aug. 26	5.3	July 20	34.4
Broad River.					
Blairs, S. C.	31.1	Aug. 27	0.1	*	31.0
Saluda River.					
Chappels, S. C	34.7	Aug. 26	2.0	Oct. 19, Nov. 24	32.7
Congaree River.					
Columbia, S. C.	35.8	Aug. 27	0.4	Aug. 16	35.4
Broad River.					
Carlton, Ga.	29.0	Aug. 25	2.2	Aug. 2-4	26.8

TABLE IV.—*Heights of rivers referred to zeros of gages, 1908*—Continued.

Stations.	Highest water. Stage.	Highest water. Date.	Lowest water. Stage.	Lowest water. Date.	Annual range.
Savannah River.	*Feet.*		*Feet.*		*Feet.*
Calhoun Falls, S. C.	28.2	Aug. 25	1.9	Oct. 13, 14, 22	26.3
Augusta, Ga	38.8	Aug. 27	6.9	Aug. 18	31.9
Oconee River.					
Milledgeville, Ga	33.2	Aug. 27	2.8	Mar. 11	30.4
Dublin, Ga	23.2	Aug. 30	— 0.2	Oct. 7	23.4
Ocmulgee River.					
Macon, Ga	20.4	Apr. 27	1.7	Oct. 6	18.7
Abbeville, Ga	17.5	May 2	1.4	Oct. 9	16.1
Flint River.					
Woodbury, Ga	9.5	Apr. 27	0.1	Aug. 15-18	9.4
Montezuma, Ga	23.2	Apr. 29	1.7	Sept. 22	21.5
Albany, Ga	27.9	May 3	0.6	Oct. 18-20, 23-27	27.3
Bainbridge, Ga	25.6	May 6	4.6	Oct. 21-30	21.0
Chattahoochee River.					
Westpoint, Ga	15.8	Apr. 26	1.7	Oct. 1, 3-8	14.1
Eufaula, Ala	47.0	Apr. 29	0.5	Sept. 20, Oct. 4-8	46.5
Alaga, Ala	38.2	Apr. 30	2.1	Oct. 6	36.1
Coosa River.					
Rome, Ga	22.0	Mar. 25	0.0	Oct. 27	22.0
Gadsden, Ala	20.8	Feb. 17	0.2	Oct. 2-9	20.6
Lock No. 4, Ala	17.3	Feb. 15	0.1	Oct. 2-8	17.2
Wetumpka, Ala	37.9	Feb. 17	0.7	Oct. 8	37.2
Tallapoosa River.					
Milstead, Ala	35.6	Apr. 28	0.6	Oct. 8	35.0
Alabama River.					
Montgomery, Ala	37.4	Feb. 17	— 0.4	Oct. 7, 8	37.8
Selma, Ala	43.0	Feb. 20	— 0.9	Oct. 6-8	43.9
Black Warrior River.					
Tuscaloosa, Ala	52.7	Mar. 25	4.3	Sept. 19	48.4
Tombigbee River.					
Columbus, Miss.	28.2	Feb. 20	— 3.3	Sept. 18-22	26.5
Vienna, Ala	36.0	Feb. 23	0.6	Nov. 16-21	35.4
Demopolis, Ala	52.1	Feb. 26	— 2.6	Oct. 7	54.7
Pascagoula River.					
Merrill, Miss	21.4	Feb. 20, 21	0.5	Oct. 21, 23	20.9
Pearl River.					
Columbia, Miss	21.0	May 11	2.8	*	18.2
Sabine River.					
Logansport, La.	32.9	May 18	1.6	*	31.3
Neches River.					
Rockland, Tex	25.0	May 25	0.4	Aug. 17-20, Oct. 21, 27-29	24.6
Beaumont, Tex	7.3	June 1	0.3	Dec. 22	7.0

TABLE IV.—*Heights of rivers referred to zeros of gages, 1908*—Continued.

Stations.	Highest water. Stage.	Highest water. Date.	Lowest water. Stage.	Lowest water. Date.	Annual range.
Trinity River.	*Feet.*		*Feet.*		*Feet.*
Dallas, Tex	52.6	May 25	4.1	Oct. 13, 18	48.5
Long Lake, Tex	51.8	June 4	2.0	Jan. 30	49.8
Riverside, Tex	49.7	June 11	0.8	Sept. 16-18	48.9
Liberty, Tex	28.1	June 17-20	4.7	Oct. 25	23.4
Brazos River.					
Kopperl, Tex	34.0	May 24	— 0.5	Mar. 31	34.5
Waco, Tex	36.7	May 25	1.4	Nov. 23-28	35.3
Valley Junction, Tex	50.9	May 27	2.3	Oct. 22	48.6
Hempstead, Tex	42.6	June 2	— 0.2	Dec. 8	42.8
Booth, Tex	42.3	June 6, 7	4.2	Nov. 7, 8	38.1
Colorado River.					
Ballinger, Tex	18.2	Apr. 19	0.0	Feb. 18-26	18.2
Austin, Tex	22.0	Aug. 23	1.0	Apr. 10	21.0
Columbus, Tex	35.8	Apr. 27	5.8	Feb. 2-8	30.0
Guadalupe River.					
Gonzales, Tex	20.5	May 27	0.4	*	20.1
Victoria, Tex	21.1	May 29	0.8	Oct. 7, 8	20.3
Red River of the North.					
Moorhead, Minn. (102)	14.7	June 13	6.2	Nov. 13	8.5
Snake River.					
Lewiston, Idaho.	14.1	June 15, 16	0.7	Aug. 14, 15, 19, 20.	13.4
Riparia, Wash	13.7	June 17	1.2	Sept. 1-4	12.5
Columbia River.					
Wenatchee, Wash	41.0	June 18	3.0	Feb. 5-7	38.0
Umatilla, Oreg	21.9	June 17, 18	0.1	Feb. 9-11	21.8
The Dalles, Oreg	37.1	June 18	— 0.5	Feb. 5	37.6
Willamette River.					
Albany, Oreg	10.5	Jan. 1	0.7	Sept. 28-Oct. 2	9.8
Salem, Oreg	17.8	Mar. 17	— 0.2	Sept. 29-Oct. 13	18.0
Portland, Oreg	21.2	June 20, 21	0.5	Nov. 16	20.7
Sacramento River.					
Red Bluff, Cal	22.0	Feb. 10	0.5	Aug. 29-Sept. 16	21.5
Sacramento, Cal	20.4	Feb. 13	5.3	*	15.1

Figures in parenthesis indicate number of days river was frozen during the year.
(*a*) No readings for January. * Various dates.
(*b*) No readings from January 19 to May 17, inclusive.
(*c*) No readings from January 7 to February 15, inclusive.
(*d*) No readings from June to December, inclusive.
(*e*) No readings from August to January, inclusive, of each year.
(*f*) No readings from October 20 to November 25, inclusive.
(*g*) No readings from June 1 to 10, inclusive.
(*h*) No readings for December. (*i*) No readings from September 1 to 22, inclusive.

TABLE V.—*Average monthly and annual departures of temperature from the normal, during 1908.*

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
New England	+ 2.3	— 3.1	+1.6	—0.6	+1.5	+1.2	+2.1	—0.9	+2.1	+2.6	+1.1	0.0	+0.8
Middle Atlantic	+ 1.3	— 3.7	+4.6	+2.7	+1.1	+0.1	+1.2	—1.1	+0.2	+2.0	+1.6	+1.2	+0.9
South Atlantic	0.0	— 3.9	+6.4	+4.8	+1.2	—0.5	+0.2	+0.1	—1.0	—1.3	+3.0	+4.0	+1.1
Florida Peninsula	+ 1.0	— 3.0	+3.5	+5.6	+1.0	—0.4	—0.2	—0.3	—0.1	—1.8	+0.7	+4.2	+0.8
East Gulf	— 0.1	— 3.3	+7.1	+4.3	+0.4	+0.4	—0.2	+0.8	+0.4	—2.8	+3.9	+4.6	+1.3
West Gulf	+ 3.5	+ 1.1	+6.5	+1.5	+0.4	+0.7	—1.0	+0.4	+0.1	—1.8	+2.9	+3.5	+1.5
Ohio Valley and Tennessee	+ 0.8	— 1.6	+6.4	+1.7	+1.1	—0.4	+0.3	+0.5	+2.9	+0.5	+2.9	+2.2	+1.4
Lower Lakes	+ 1.4	— 3.3	+3.1	—0.3	+1.3	+0.4	+0.3	—1.1	+3.5	+2.0	+2.2	—0.1	+0.8
Upper Lakes	+ 4.0	+ 0.4	+2.6	+1.2	+1.1	+0.1	+0.6	+0.3	+5.6	+2.9	+3.6	—0.1	+1.9
North Dakota	+11.8	+ 8.0	+0.3	+3.0	—2.0	—1.6	+0.6	—3.2	+3.6	—0.7	+6.4	+1.4	+2.3
Upper Mississippi Valley	+ 5.3	+ 2.4	+5.0	+0.8	—0.3	—2.0	—0.9	—0.6	+4.5	+0.6	+4.1	+2.3	+1.8
Missouri Valley	+ 8.9	+ 4.9	+5.7	+2.4	—1.3	—2.3	—1.5	—1.1	+4.6	—0.5	+4.2	+4.0	+2.2
Northern Slope	+ 6.8	+ 3.7	+1.2	+3.3	—2.6	—3.7	+0.4	—2.4	+2.2	—1.5	+2.5	+1.3	+0.9
Middle Slope	+ 7.1	+ 5.2	+5.8	+0.9	—1.8	—1.1	—2.3	—0.8	+1.3	—1.5	—1.2	+3.0	+1.3
Southern Slope	+ 4.4	+ 2.8	+6.0	—0.6	—0.8	+0.2	—3.2	—0.8	—1.1	—2.0	0.0	+2.7	+0.6
Southern Plateau	+ 2.8	+ 0.2	+2.1	+0.6	—4.2	—2.3	—0.2	—0.7	—0.8	—4.2	—0.6	—0.4	—0.6
Middle Plateau	+ 2.8	+ 0.8	+1.7	+1.7	—5.6	—4.4	+0.9	—1.3	—0.8	—3.6	—0.4	—3.2	—1.0
Northern Plateau	+ 3.0	+ 3.0	+1.3	+2.0	—4.1	—2.5	+2.6	—0.7	+1.2	—1.2	+2.6	—1.9	+0.4
North Pacific	+ 2.5	+ 0.8	—0.2	0.0	—2.9	—1.1	+1.2	—1.2	—0.9	—0.6	+3.2	—1.5	—0.1
Middle Pacific	+ 1.7	— 0.9	+0.5	+2.0	—2.8	—2.7	+1.8	—1.0	+0.5	—1.2	+0.4	—3.8	—0.5
South Pacific	+ 2.5	— 0.6	+1.8	+2.5	—2.6	—2.4	+2.0	+0.4	+1.2	—0.6	—0.4	—2.3	+0.1

TABLE VI.—*Monthly and annual departures of precipitation from the normal, during 1908.*

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
New England	−0.6	+0.5	−0.9	−0.8	+0.8	−1.5	−0.7	+0.6	−2.1	−0.5	−2.5	+0.1	−7.6
Middle Atlantic	−0.1	+0.5	−0.9	−0.6	+1.5	−1.1	−0.1	+0.8	−1.0	−0.3	−1.9	−0.1	−3.4
South Atlantic	+0.3	−0.6	−0.6	−0.4	−0.5	−0.2	+0.6	+2.9	+0.1	+0.6	−1.4	−1.0	−0.2
Florida Peninsula	−0.2	−1.1	−2.8	+0.7	−1.1	+0.6	−0.8	+0.2	+2.8	+0.2	+0.4	−1.7	−2.8
East Gulf	+0.3	+0.1	−1.2	+1.2	+1.2	−1.7	+0.6	−1.0	−0.8	−1.2	−2.2	−1.2	−5.5
West Gulf	−1.1	+0.5	−0.9	+1.4	+3.3	−1.5	−0.5	+0.4	+1.2	−1.6	−0.7	−1.3	−0.1
Ohio Valley and Tennessee	−1.3	+0.6	+0.6	+0.8	+1.0	−2.0	−0.5	−0.4	−1.6	−1.8	−1.6	−0.8	−6.8
Lower Lakes	−0.7	+1.4	+0.3	+0.3	+0.4	−1.1	0.0	−0.4	−1.8	−1.5	−1.6	+0.9	−5.1
Upper Lakes	−0.5	+0.8	0.0	+0.6	+1.0	−1.1	−0.4	−0.1	−1.2	−1.8	−0.2	−0.6	−3.5
North Dakota	−0.4	+0.7	+0.4	−0.2	+0.5	−0.2	−0.2	+0.1	−0.4	+0.4	+0.4	−0.2	+0.9
Upper Mississippi Valley	−0.8	+0.9	−0.5	+0.5	+2.9	+0.1	−0.8	−0.3	−1.5	−1.3	−0.3	−0.9	−2.0
Missouri Valley	−0.5	+1.0	−0.6	−0.2	+1.2	+2.4	−0.4	+0.2	−1.8	+2.6	+0.9	−0.4	+4.4
Northern Slope	−0.3	−0.1	+0.1	−0.8	+2.2	+1.1	+0.1	+0.2	+0.1	+1.4	−0.5	−0.3	+3.2
Middle Slope	−0.3	+0.6	−1.1	−0.4	+1.1	+3.8	−0.4	+1.4	−0.1	+1.1	+0.8	−0.6	+5.9
Southern Slope	−0.2	−0.1	−0.7	+1.7	+2.2	+1.9	+0.3	−0.4	−0.1	+1.2	+0.4	−1.0	+5.2
Southern Plateau	−0.1	+0.4	−0.4	+0.3	0.0	−0.2	+0.5	+0.3	−0.3	−0.4	−0.1	−0.4	−0.7
Middle Plateau	−0.2	−0.1	−0.6	−0.6	+0.6	+0.2	+0.4	+0.7	+0.5	+0.6	−0.4	0.0	+1.1
Northern Plateau	−0.9	−0.4	−0.5	−0.6	+0.5	+0.5	+0.3	0.0	0.0	+0.4	−0.8	−0.9	−2.4
North Pacific	−1.2	−0.4	+0.2	−0.4	+0.3	−1.1	−0.3	+0.3	−1.8	+0.3	−1.2	−2.2	−7.5
Middle Pacific	+0.5	+0.6	−2.7	−1.9	−0.1	−0.3	0.0	0.0	−0.5	−0.1	−1.1	−1.9	−7.5
South Pacific	+1.3	+0.4	−2.0	−0.6	−0.3	−0.1	0.0	+0.2	+0.4	−0.6	−0.4	−1.2	−2.9

TABLE VII.—*Monthly and annual departures of relative humidity from the normal, during 1908.*

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
New England	−6	−1	0	−4	0	−6	−6	−2	−3	−1	−4	−4	−3
Middle Atlantic	−4	−1	+6	+1	+4	−3	+1	0	−1	0	−2	−2	0
South Atlantic	−1	−2	+4	+2	+1	+1	+1	+1	0	+1	−1	0	+1
Florida Peninsula	−1	−5	+4	+6	−2	0	−1	+2	+1	0	+1	+1	0
East Gulf	−5	−3	+7	+6	+4	−2	+2	−1	0	−5	−1	−1	0
West Gulf	−7	−4	+5	+5	+2	0	+1	+3	+3	−4	−1	0	0
Ohio Valley and Tennessee	−5	−1	+1	+2	+6	−3	+2	−1	−6	−2	−5	−1	−1
Lower Lakes	−4	+1	0	0	+6	−2	+1	−2	−7	−6	−5	−1	−2
Upper Lakes	−5	−2	−2	−1	+4	−2	+1	−2	−3	−2	0	−2	−1
North Dakota	−1	+4	+2	−2	+6	+3	−4	−2	−1	+6	−2	+9	+2
Upper Mississippi Valley	−3	0	−3	−1	+5	+1	+4	0	−2	−3	−2	−4	−1
Missouri Valley	−8	0	−4	−3	+4	+6	+3	+2	−3	+1	−2	−2	0
Northern Slope	−1	+2	0	−2	+11	+9	+6	+8	+3	+12	+2	+8	+5
Middle Slope	−8	−2	−5	+2	+1	+3	+6	+7	+5	+4	+3	+1	+1
Southern Slope	−4	−8	−3	+8	−4	−3	+11	+8	+4	−2	−2	−4	0
Southern Plateau	+6	+10	+3	+12	+3	−3	+8	+13	+2	−7	+1	+15	+5
Middle Plateau	+4	−1	−4	+1	+5	+12	+7	+15	+9	+4	+1	+2	+5
Northern Plateau	−2	0	−5	−7	+1	+2	+3	+5	−1	+2	−5	0	−1
North Pacific	+1	+1	+2	+6	+3	+2	0	+1	−2	+2	0	+1	+1
Middle Pacific	+3	+4	−6	−8	+1	+1	0	−1	−4	−2	+1	+3	−1
South Pacific	0	+5	−7	−3	−2	−1	−3	0	0	−9	+4	+1	+1

TABLE VIII.—*Monthly and annual departures of average cloudiness from the normal, during 1908.*

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
New England	−0.5	−0.1	+0.7	−0.2	+0.4	−1.5	−0.1	+0.2	−0.1	−0.5	+0.6	+0.7	0.0
Middle Atlantic	−0.3	+0.1	+0.6	−0.4	+0.8	−0.8	+0.5	+0.4	0.0	−0.2	−0.1	+0.9	+0.1
South Atlantic	−0.3	−0.4	−0.1	+0.7	0.0	−0.4	+0.4	+0.2	−0.1	+0.1	−0.6	+0.7	0.0
Florida Peninsula	−0.6	−0.9	−1.4	−0.9	−0.8	+0.4	−0.3	+0.6	+0.1	0.0	−0.6	−0.2	−0.4
East Gulf	0.0	−0.1	+0.3	+1.3	+0.4	−0.3	+1.2	+0.4	+0.9	−0.8	−0.2	+0.6	+0.3
West Gulf	−0.5	−0.8	+0.1	+0.4	−0.2	−0.4	+0.2	−0.3	+0.6	−0.8	0.0	+0.1	−0.1
Ohio Valley and Tennessee	−0.5	+0.7	+0.8	+0.5	+0.7	−0.2	+0.4	+0.1	−1.2	−0.7	−0.8	+0.4	0.0
Lower Lakes	−0.7	+0.1	+0.8	+0.5	+0.7	−1.4	−0.5	−0.5	−1.9	−1.2	−0.2	+0.1	−0.4
Upper Lakes	−0.8	+1.0	+0.8	+0.2	+0.9	−0.5	0.0	−0.4	−0.7	−0.5	−0.1	+0.6	0.0
North Dakota	+1.3	+1.0	+1.1	−0.5	+0.3	+0.4	−0.4	−0.2	−0.3	+1.0	+0.8	+0.2	+0.3
Upper Mississippi Valley	−0.4	+0.5	+0.5	−0.3	+0.8	+0.1	+0.6	+0.1	−0.9	+0.1	+0.1	−0.3	+0.1
Missouri Valley	−1.1	+0.2	+0.1	−0.3	−0.2	+0.7	+0.1	+0.1	−0.6	+1.1	−0.1	−0.6	0.0
Northern Slope	−0.2	+0.8	+0.6	−1.2	+0.6	−0.1	−0.7	+0.2	0.0	+1.3	0.0	+0.9	+0.2
Middle Slope	−0.4	+0.4	+0.4	+0.8	0.0	+0.8	+0.8	+0.8	−0.1	+1.0	+0.5	0.0	+0.4
Southern Slope	+0.5	+0.2	+0.7	+0.9	−0.7	−1.0	+1.4	−0.8	+0.3	+0.2	+0.7	+0.8	+0.3
Southern Plateau	+0.7	+1.0	+0.5	+0.4	+0.1	−0.6	+1.1	+0.2	0.0	−0.4	+1.0	+1.0	+0.3
Middle Plateau	+0.6	+0.2	−0.9	−1.2	+0.6	+0.4	+1.7	+1.2	+1.0	+0.7	−0.1	−0.3	+0.3
Northern Plateau	−0.7	−0.3	−0.3	−2.4	+0.5	−0.7	−1.7	+0.2	−0.3	+0.9	+0.1	+0.5	−0.4
North Pacific	0.0	+0.2	+0.1	−0.7	+1.6	−0.1	−0.2	+1.3	0.0	−0.6	+0.6	+0.2	+0.2
Middle Pacific	+1.7	+0.6	−1.7	−1.1	−1.1	−0.3	+0.6	+0.9	+1.3	+0.8	+1.7	+0.6	+0.3
South Pacific	+1.5	+1.0	−1.6	−1.4	−1.6	−1.1	−0.4	−0.4	+0.7	−1.4	+1.7	+0.9	−0.2