CLIMATOLOGICAL DATA FOR JULY 1948

CONDENSED CLIMATOLOGICAL SUMMARY OF TEMPERATURE AND PRECIPITATION, BY SECTIONS

[For description of tables and charts, see REVIEW, January 1943, p. 15]

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.

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	81.2	+0.9	2 stations	104	[1] 3	Valley Head	53	25	6.23	+0.64	Columbia	19.92	Pushmataha	1.91
Arizona	80.8	+.6	Mohawk	117	8	Ft. Valley	27	9	1.64	−.45	Rucker Canyon	5.96	Salome	T
Arkansas	80.5	.0	Magnolia	105	25	Bethseda	51	2	4.11	+.44	Pine Bluff	9.09	Walnut Grove	.84
California	71.4	−2.2	Cow Creek	124	17	Boca	27	5	.10	+.01	Palm Springs	2.80	465 stations	.00
Colorado	67.5	+.3	2 stations	105	[1] 14	Pearl	23	9	1.39	−.74	Stonington	4.61	Erie	T
Florida	81.4	+.1	3 stations	99	[1] 7	Taniami Trail	62	3	10.44	+3.06	St. Marks	21.15	Miami Beach	1.91
Georgia	80.1	+.1	do	103	[1] 4	2 stations	53	25	7.67	+1.96	Ft. Gaines	17.69	Alapaha	3.55
Idaho	65.3	−2.8	Grandview	106	22	Grouse	22	28	1.13	+.47	Roland (West Portal)	4.34	4 stations	.00
Illinois	75.5	−.9	Alton Dam	100	28	Virden	38	29	5.72	+2.55	La Harpe	14.54	Waukegan	.75
Indiana	74.9	−.7	Jeffersonville	100	[1] 4	La Porte	46	[1] 1	4.35	+1.04	Bedford	11.24	Noblesville	1.00
Iowa	75.0	.0	Britt	106	6	2 stations	43	[1] 1	4.14	+.53	Muscatine	11.13	Delaware	.59
Kansas	77.8	−1.3	Liberal	106	14	Burr Oak	45	23	6.09	+2.94	Erie	17.59	Ulysses	.76
Kentucky	76.6	−.4	Benham	103	5	Mammoth Cave Park	45	2	5.08	+.94	Rumsey Lock	12.09	Ashland Dam	1.90
Louisiana	83.8	+1.9	Winnfield	105	31	North Livingston	62	9	3.44	−2.61	Port Sulphur	10.98	Ashland	.24
Maryland-Delaware	76.5	+1.3	Hancock, Md	99	30	Oakland, Md	44	2	3.42	−.93	Bridgeville, Del	7.14	Williamsport, Md	.60
Michigan	69.2	.0	Munising	98	9	Watersmeet	29	1	2.34	−.37	Lapeer	7.22	Benton Harbor Arpt.	.57
Minnesota	70.5	+.5	St. Peter	105	6	Cloquet Forest Sta	34	1	3.40	+.15	International Falls	8.08	Rochester Airport	.51
Mississippi	82.8	+1.7	Crystal Springs	103	9	Batesville	59	2	4.44	−.63	Merrill	16.29	Chatham	.54
Missouri	77.4	−.3	Brookfield	102	7	Marble Hill	46	2	5.56	+2.02	St. Louis Airport	12.69	Poplar Bluff	1.09
Montana	64.9	−2.2	Wolf Point	108	5	West Yellowstone	20	18	2.41	+1.03	Richey	8.09	Wyola	.46
Nebraska	75.2	−.3	Hay Springs	108	5	4 stations	42	[1] 23	3.26	+.20	Ashland	9.41	Agate	.57
Nevada	71.7	−.9	Overton	118	21	Sheldon	25	28	.05	−.33	San Jacinto	.97	Cottonwood Ranch	.00
New England	69.8	+.7	2 stations	97	[1] 12	First Conn. Lake, N. H.	37	7	3.47	−.30	Hardwick, Mass	8.00	Sunday River, Maine	.99
New Jersey	74.7	+.8	4 stations	96	[1] 5	2 stations	43	8	4.06	−.64	Rutherford	7.17	Berlin	1.29
New Mexico	73.8	+1.5	2 stations	107	[1] 10	Selsor	30	13	1.49	−.93	Ruidso	5.58	E. G. Hill Ranch	T
New York	70.4	−.6	Dansville	99	12	McKeever	37	27	3.61	−.35	Hempstead	7.70	Honk Falls	.91
North Carolina	77.8	+.9	Albemarle	103	22	2 stations	41	2	4.89	−1.09	Rock House	18.54	Winston-Salem	.59
North Dakota	68.7	−.3	McLeod	108	8	Upham	34	27	4.03	+1.62	Pembina	10.68	Almont	1.61
Ohio	73.6	.0	Hillsboro	100	[1] 3	Mill Port	45	2	3.69	−.10	Lowell	9.35	Ashland	1.09
Oklahoma	81.4	−.4	2 stations	107	[1] 21	Goodwell	53	2	3.78	+1.01	Cusing	10.46	Gage	.54
Oregon	63.4	−3.0	Lake Creek	108	31	2 stations	26	[1] 2	.88	+.45	Headworks	3.22	Jordan Valley	.02
Pennsylvania	72.0	−.1	2 stations	97	[1] 1	Kane	38	8	3.81	−.49	Avoca	8.27	Sellersville	.50
South Carolina	80.5	+.7	do	102	[1] 6	Caesar's Head	58	9	5.10	−.79	Myrtle Beach	11.65	Columbia	1.17
South Dakota	72.7	−.4	Milbank	104	4	2 stations	40	[1] 17	3.61	+1.20	Canistota	9.94	Highmore	.73
Tennessee	78.6	+.9	2 stations	103	[1] 5	Rugby	46	2	4.95	+.48	Loudon	8.78	Nashville Airport	1.65
Texas	83.5	+.5	Pecos	111	20	Socorro	50	9	2.28	−.30	Gordonville	11.98	4 stations	.00
Utah	70.7	−1.1	Greenriver	108	[1] 10	East Portal	25	29	.35	−.54	Yellowstone R. S	1.40	Corinne	.00
Virginia	75.8	+.5	Blackstone	100	6	2 stations	40	[1] 2	3.91	−.77	Damascus	8.72	Moores Creek Dam	.48
Washington	62.9	−3.4	Dallesport	103	31	Stockdill Ranch	30	[1] 2	1.74	+1.06	Palmer	4.92	Wapato	.05
West Virginia	73.3	+.2	Hinton	102	5	Kumbrabow St. Forest.	32	2	5.44	+.82	Sand Fork	10.50	Bluestone Dam	1.50
Wisconsin	70.8	+.7	Eau Clare	102	8	Land O'Lakes	29	1	3.01	−.40	Prentice	6.96	La Crosse	.71
Wyoming	66.2	+.3	Deaver	107	2	Bondurant	24	[1] 26	1.08	−.23	Sheridan Field Sta	3.51	Farson	T
Alaska (June)	52.0	−.4	University Exp. Sta	91	18	Barrow	15	11	1.50	−.22	Whittier	13.23	Naknek	.00
Hawaii	74.1	+.1	4 stations	90	[1] 18	Haleakala R. S	29	13	5.86	+.17	Kukui	42.00	3 stations	.00
Puerto Rico	79.4	+.8	Corozal	96	16	Garzas	59	[1] 10	7.34	+.67	Rio Blanco	18.53	Borinquen Field	1.80
Hawaii (June)	73.4	+.2	Hoaeae	91	[1] 20	Haleakala R. S	40	[1] 6	3.64	−1.14	Kukui	30.00	Camp K-3	.00

[1] Other dates also.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR JULY 1948

District and station	Elevation of instruments: Barometer above sea level[1]	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Averages: Mean maximum	Temperature of the air: Averages: Mean minimum	Temperature of the air: Averages: Mean	Temperature of the air: Averages: Departure from normal	Temperature of the air: Extremes: Highest	Temperature of the air: Extremes: Date	Temperature of the air: Extremes: Lowest	Temperature of the air: Extremes: Date	Temperature of the air: Extremes: Greatest daily range	Total heating degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Precipitation: Days with thunderstorms	Precipitation: Total snowfall (unmelted)	Precipitation: Snow, sleet, and ice on ground at end of month	Wind: Average hourly speed	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Character of day (sunrise to sunset), number of days: Clear	Character of day (sunrise to sunset), number of days: Partly cloudy	Character of day (sunrise to sunset), number of days: Cloudy	Average cloudiness, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Ft.	Ft.	Mb.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.		°F.		°F.	%	In.	In.	In.			In.	In.	m. p.h.					0-3	4-7	8-10	0-10	%
NEW ENGLAND									68.4	+1.7								77	3.12	-.6														6.0	
Caribou [2]	628	5	33	988.5	1,011.2	----	76	53	64.8	+.2	86	11	45	7	35	62	56	74	2.73	-1.2	.58	9	5	0.0	0.0	----	nw.	--	----	--	0	18	13	7.1	--
Eastport	75	67	82	1,008.0	1,011.5	-2.4	72	52	61.9	+1.5	86	11	47	8	34	123	53	78	5.37	+2.3	2.48	13	5	.0	.0	7.4	s.	29	ne.	6	5	11	15	6.5	58
Portland, Maine [2]	103	6	43	1,008.5	1,012.2	-2.4	82	58	70.2	+4.5	94	11	50	3	35	14	59	70	1.24	-2.0	.62	9	0	.0	.0	7.4	w.	22	ne.	6	12	11	8	5.2	76
Concord [2]	289	5	45	1,002.4	1,012.9	-1.7	84	56	70.0	+2.6	93	12	46	9	39	3	60	72	2.41	-1.2	1.13	9	5	.0	.0	5.4	nw.	21	n.	6	8	11	12	5.9	67
Mt. Washington	6,274	5	37	808.9	1,019.4	----	55	42	48.6	-.6	66	12	30	7	22	505	46	90	3.28	-2.8	1.37	12	3	.0	.0	27.1	w.	--	----	--	2	11	18	7.5	32
Burlington [2]	403	6	51	998.0	1,012.2	-1.3	83	59	71.1	+.8	96	12	48	15	36	6	60	71	4.54	+1.0	1.94	14	7	.0	.0	7.6	s.	25	s.	18	7	16	8	5.6	60
Boston [2]	124	33	62	1,008.6	1,013.1	-1.5	84	65	74.5	+2.8	96	12	53	7	25	3	61	67	4.53	+1.0	1.53	11	7	.0	.0	10.6	sw.	33	ne.	6	6	13	12	5.9	70
Nantucket [2]	12	4	34	1,013.5	1,014.2	-.7	76	61	68.4	+.6	84	9	52	16	24	15	63	88	1.28	-1.6	.65	6	4	.0	.0	11.7	sw.	33	ne.	7	6	13	12	6.1	59
Block Island	26	11	46	1,012.5	1,013.5	-1.4	76	63	69.5	+1.1	83	30	55	7	18	4	64	88	2.27	-.8	.90	9	5	.0	.0	13.5	sw.	33	ne.	7	8	14	9	5.6	72
Providence [2]	159	65	60	1,007.8	1,013.5	-1.4	87	65	76.0	+2.6	96	12	55	7	30	0	63	76	5.13	+1.9	1.65	9	5	.0	.0	7.4	sw.	29	w.	6	6	17	8	5.7	73
Hartford [2]	159	5	44	1,008.1	1,013.9	-.7	85	62	73.4	+1.8	93	5	53	8	35	0	64	74	2.37	-2.0	1.08	8	4	.0	.0	7.1	s.	28	nw.	6	7	17	7	5.8	78
New Haven [2]	107	5	39	1,009.8	1,013.9	-1.3	81	63	72.0	+2.7	87	28	53	8	25	0	64	76	2.35	-1.7	.88	10	10	0	.0	5.7	sw.	17	ne.	7	8	19	4	5.5	72
MIDDLE ATLANTIC									76.2	+1.0								75	4.02	-.4														5.8	
Albany [2]	97	6	40	1,009.5	1,012.9	-1.3	84	58	71.0	+.1	94	12	50	3	35	0	60	70	2.71	-.1	1.07	8	5	.0	.0	6.7	s.	33	w.	6	7	18	6	5.6	75
New York [4]	314	415	454	1,003.4	1,014.2	-.7	83	68	75.6	+1.8	90	5	59	8	25	0	63	66	7.52	+3.3	3.28	11	7	.0	.0	11.5	sw.	43	w.	5	7	15	9	5.9	69
Allentown [2]	385	4	58	1,001.0	1,014.9	----	86	63	74.5	+.3	94	5	52	8	34	0	64	77	2.41	-2.2	.78	10	5	.0	.0	----	sw.	--	----	--	6	14	11	6.2	--
Harrisburg [2]	374	30	49	1,001.0	1,014.6	-.6	85	65	75.3	+.5	92	30	55	8	29	0	64	72	2.02	-1.8	1.69	10	7	0	0	6.1	w.	21	w.	6	6	7	18	6.7	64
Philadelphia [4]	114	174	150	1,010.5	1,014.6	-1.0	84	69	76.8	+.6	91	5	61	8	22	0	67	76	3.40	-.8	.79	9	6	.0	.0	6.3	s.	24	sw.	6	5	15	11	6.1	64
Reading	323	47	306	1,002.7	1,014.2	-1.0	86	67	76.2	+1.0	94	5	58	8	26	0	----	--	2.51	-1.8	.98	8	4	.0	.0	8.5	sw.	31	nw.	6	6	12	13	6.2	51
Scranton	805	72	104	984.8	1,013.5	-2.1	82	62	72.1	+.4	91	12	52	8	30	1	----	--	7.17	+3.1	3.12	9	7	.0	.0	5.4	n.	31	nw.	6	9	16	6	5.1	70
Atlantic City	52	37	172	1,012.5	1,014.2	-1.0	80	68	74.0	+1.9	89	6	60	8	25	0	68	84	4.08	+.2	1.39	8	7	.0	.0	13.0	s.	39	sw.	23	9	13	9	5.5	68
Newark [2]	30	5	46	1,013.2	1,014.2	----	87	66	76.7	+1.9	95	12	56	8	29	0	64	70	6.88	+2.2	2.79	12	4	.0	.0	----	sw.	--	----	--	6	15	10	6.2	--
Trenton	190	89	107	1,007.8	1,014.6	-.3	85	67	76.2	+1.7	93	5	59	8	26	0	----	--	4.59	+.6	1.81	12	5	.0	.0	7.5	s.	25	sw.	13	7	15	9	5.6	63
Baltimore [4]	123	100	215	1,010.5	1,014.9	-.3	86	71	78.7	+1.5	95	5	64	8	24	0	66	73	1.94	-2.7	1.16	11	8	.0	.0	9.2	s.	47	nw.	6	5	16	10	5.8	63
Washington [4]	112	56	100	1,012.9	1,015.2	.0	87	69	78.4	+1.6	95	5	58	9	26	0	66	70	3.60	-1.1	2.06	9	8	.0	.0	5.9	sw.	24	n.	6	5	16	10	6.1	74
Cape Henry	18	8	54	1,014.6	1,015.2	-.4	87	71	79.0	+1.5	96	6	66	3	27	0	70	80	2.64	-2.7	1.41	14	13	.0	.0	10.2	sw.	37	nw.	23	11	14	6	5.0	71
Lynchburg [2]	686	5	58	991.2	1,015.6	-.7	87	67	76.7	+.6	93	5	56	9	30	0	66	78	2.22	-2.0	.56	12	11	.0	.0	6.8	sw.	25	w.	20	6	16	9	6.1	67
Norfolk [4]	91	80	125	1,012.5	1,015.9	-.4	88	72	79.8	+1.1	95	22	66	9	25	0	69	77	4.86	-.9	3.09	9	13	.0	.0	9.0	sw.	27	nw.	23	9	7	15	6.2	70
Richmond [4]	144	11	52	1,009.8	1,014.9	-1.0	88	69	78.6	+.1	94	22	56	9	27	0	68	76	5.79	+1.1	3.18	9	9	.0	.0	6.4	sw.	23	nw.	6	10	16	5	5.3	73
SOUTH ATLANTIC									80.5	+1.6								76	5.09	-.7														6.0	
Asheville	2,253	77	92	944.1	1,016.3	-.3	86	65	75.4	+3.7	97	4	55	2	34	0	65	80	4.10	-.2	1.70	14	10	.0	.0	6.2	nw.	20	nw.	19	9	11	11	6.0	62
Charlotte [4]	779	63	86	988.5	1,015.9	-.4	91	71	81.1	+2.7	98	6	64	2	25	0	68	69	1.54	-3.6	.75	10	4	.0	.0	6.6	sw.	17	sw.	14	5	15	11	6.3	65
Greensboro [2]	886	6	56	985.1	1,016.6	+.3	89	68	78.5	+1.3	97	6	59	2	33	0	67	72	2.22	-2.9	.79	8	10	.0	.0	6.9	sw.	29	w.	21	6	14	11	6.0	63
Hatteras	11	5	47	1,015.9	1,016.3	.0	84	76	79.9	+1.7	88	21	69	3	14	0	72	79	3.85	-1.6	1.09	10	11	.0	.0	13.6	sw.	34	sw.	29	3	16	12	6.5	69
Raleigh [4]	376	5	71	1,002.7	1,015.9	.0	91	70	80.8	+2.0	98	6	60	9	30	0	68	74	5.86	+.5	1.75	13	11	.0	.0	6.9	sw.	26	nw.	23	3	23	5	5.6	60
Wilmington	72	73	107	1,015.6	1,016.9	+.3	88	74	80.7	+1.6	92	7	69	8	19	0	73	80	5.05	-2.1	2.17	16	18	.0	.0	10.0	sw.	29	sw.	19	8	14	9	5.6	68
Charleston [4]	48	11	92	1,014.9	1,016.6	.0	88	76	82.0	+.6	97	7	71	9	25	0	73	82	10.30	+3.4	2.83	15	11	.0	.0	9.7	s.	31	nw.	1	7	15	9	5.7	67
Columbia, S. C. [4]	347	70	91	1,003.7	1,015.9	-.7	92	73	82.6	+1.7	100	4	70	9	28	0	70	71	1.16	-4.2	.49	8	10	.0	.0	8.3	s.	27	sw.	19	8	11	12	5.7	65
Greenville, S. C. [2]	1,040	18	36	979.3	1,015.6	-.3	88	70	79.1	+2.2	97	5	65	9	28	0	68	73	2.90	-2.5	1.27	11	10	.0	.0	7.0	sw.	30	n.	5	8	11	12	6.0	62
Augusta [4]	182	62	77	1,009.5	1,015.9	.0	92	73	82.6	+1.3	101	4	69	25	28	0	70	71	4.04	-1.4	1.64	8	12	.0	.0	5.7	s.	28	s.	28	7	13	11	5.9	68
Savannah [2]	65	19	51	1,014.6	1,016.9	+.3	90	73	81.6	+.7	96	7	70	4	24	0	72	78	11.33	+4.7	5.36	15	17	.0	.0	9.0	sw.	41	w.	24	5	15	11	6.4	72
Jacksonville [4]	43	86	110	1,015.6	1,017.3	.0	90	74	82.0	-.1	94	1	69	1	25	0	72	77	8.68	+2.0	2.26	20	22	.0	.0	7.1	sw.	28	s.	24	0	21	10	6.7	50
FLORIDA PENINSULA									82.4	+.3								78	6.08	+.5														6.7	
Key West [4]	21	10	64	1,015.9	1,016.6	-.3	90	79	84.0	+.5	91	7	72	5	16	0	74	74	5.61	+2.3	2.52	20	7	.0	.0	8.1	e.	25	sw.	18	2	20	9	6.1	49
Miami [4]	25	242	249	1,015.9	1,016.6	-1.0	86	77	81.3	-.5	89	18	70	14	15	0	74	80	4.30	-1.3	1.27	14	14	.0	.0	11.4	se.	40	se.	13	2	17	12	6.7	65
Tampa [2]	35	5	36	1,015.9	1,017.3	.0	90	73	82.0	+.8	95	16	70	6	23	0	72	79	8.33	+.4	2.15	18	27	.0	.0	6.4	e.	34	s.	31	0	15	16	7.3	59
EAST GULF									81.9	+1.0								77	7.13	+1.6														6.2	
Atlanta [2]	1,173	33	72	975.3	1,015.2	-1.4	90	70	80.0	+.9	99	5	63	25	29	0	68	73	11.26	+6.4	5.44	10	7	.0	.0	8.0	sw.	27	s.	10	7	15	9	5.7	67
Macon [4]	370	79	87	1,002.7	1,015.9	-.7	90	72	80.9	-.3	99	7	66	26	30	0	70	75	6.68	+1.9	2.82	14	19	.0	.0	5.7	s.	26	sw.	7	6	12	13	6.5	68
Thomasville	273	48	----	1,008.1	1,018.0	+1.1	90	72	80.9	-.9	96	19	68	25	24	0	----	--	8.15	+1.4	2.13	16	15	.0	.0	----	----	--	----	--	0	22	9	----	--
Apalachicola	35	11	51	1,015.2	1,016.6	.0	87	74	80.8	-.9	93	24	70	3	21	0	74	84	13.41	+5.7	3.10	23	18	.0	.0	6.6	sw.	36	s.	9	5	11	15	6.5	47
Pensacola [4]	56	54	79	1,013.9	1,015.6	-1.0	89	75	82.2	+1.2	98	24	71	1	26	0	74	80	15.59	+8.8	7.85	16	19	.0	.0	6.7	w.	32	se.	9	4	16	11	6.4	72
Anniston	618	6	32	997.0	1,015.9	-.7	90	68	79.2	+.7	99	5	61	25	34	0	70	79	8.32	+3.1	2.54	14	15	.0	.0	----	----	--	----	--	--	--	--	--	--
Birmingham [2]	700	5	63	990.9	1,015.6	-1.0	91	70	81.0	+1.3	100	5	64	25	30	0	69	72	6.55	+1.4	1.54	14	13	.0	.0	6.7	s.	35	ne.	9	3	15	13	6.5	49
Mobile [4]	57	86	161	1,013.9	1,015.9	-.4	92	76	83.7	+2.3	97	24	69	1	22	0	73	80	2.84	-4.0	.76	15	16	.0	.0	6.7	s.	26	nw.	24	1	22	8	6.6	55
Montgomery [4]	218	92	105	1,007.5	1,015.2	-1.4	91	74	82.4	+.7	98	7	70	10	25	0	72	76	5.22	+.4	3.44	9	10	.0	.0	6.4	s.	25	nw.	14	9	12	10	5.4	72
Meridian [4]	375	67	92	1,002.0	1,015.2	-.7	93	72	82.5	+2.1	99	6	68	24	27	0	71	75	4.04	-.8	.99	9	15	.0	.0	5.3	sw.	23	e.	5	5	20	6	5.5	74
Vicksburg [4]	247	82	102	1,006.1	1,014.9	-1.4	93	74	83.6	+2.3	97	25	68	2	24	0	72	75	1.54	-3.0	1.17	5	13	.0	.0	6.7	w.	27	w.	5	8	14	9	5.3	69
New Orleans C. O.	53	76	84	1,013.9	1,015.9	-.4	93	76	84.5	+2.1	98	24	71	25	24	0	74	77	4.63	-1.7	2.78	14	19	.0	.0	5.1	sw.	23	n.	25	1	17	13	7.0	64
New Orleans A. P. [3]	30	6	52	1,013.5	1,015.2	----	92	74	83.0	----	97	31	71	1	26	0	74	81	4.48	----	----	15	21	.0	.0	----	s.	--	----	--	1	19	11	6.3	--
WEST GULF									84.7	+1.5								73	1.79	-1.4														5.5	
Shreveport [2]	181	5	64	1,005.4	1,014.2	-1.0	96	75	85.3	+2.4	101	25	69	10	27	0	72	72	2.58	-1.0	1.73	7	6	.0	.0	7.8	sw.	34	s.	10	9	10	12	5.7	83
Fort Smith [2]	463	6	30	997.6	1,013.5	-.7	92	71	81.4	-.1	99	25	62	1	27	0	70	74	1.62	-1.8	.43	13	15	.0	.0	6.3	ne.	33	e.	7	4	12	15	6.7	72
Little Rock [2]	265	26	58	1,002.0	1,014.6	-.6	92	72	82.0	+1.1	98	25	63	2	26	0	71	76	3.41	-.1	1.88	13	15	.0	.0	6.7	sw.	31	nw.	13	6	15	10	6.1	63
Austin [2]	621	5	41	992.7	1,013.5	-1.1	96	74	84.8	+.9	101	31	68	1	28	0	70	70	2.29	.0	1.77	4	5	.0	.0	9.1	s.	36	s.	8	12	12	7	5.1	75
Brownsville [2]	20	5	54	1,010.5	1,012.5	-1.4	93	76	84.5	+.9	97	31	73	7	20	0	74	79	3.02	+.8	1.25	9	8	.0	.0	11.1	se.	26	s.	27	12	10	9	5.3	79
Corpus Christi [2]	44	6	33	1,013.2	1,013.9	-1.0	94	76	85.2	+3.6	97	31	69	1	22	0	76	81	1.03	----	.72	3	3	.0	.0	12.8	s.	33	s.	20	16	10	5	4.5	86
Dallas [2]	488	34	45	995.6	1,013.5	-1.1	95	76	85.7	+1.5	101	26	69	1	26	0	70	68	1.75	-1.1	.66	10	6	.0	.0	9.4	s.	29	s.	3	11	11	9	5.1	83
Fort Worth [2]	706	40	56	989.8	1,013.2	-1.0	95	75	84.8	+1.2	101	26	69	1	28	0	69	66	1.93	-.7	.86	10	9	.0	.0	10.3	s.	29	e.	27	12	12	7	4.9	84
Galveston [4]	54	122	129	1,013.2	1,014.9	-1.0	88	81	84.6	+1.2	92	7	74	11	13	0	76	78	.38	-3.3	.23	6	8	.0	.0	11.9	s.	27	s.	21	10	18	3	4.9	79
Houston [4]	138	157	190	1,009.8	1,014.2	-1.4	93	76	84.7	+1.0	99	31	69	1	26	0	74	80	2.13	-1.9	.66	8	13	.0	.0	8.2	s.	42	se.	8	3	19	9	6.1	67
Laredo [2]	418	10	38	997.0	1,011.2	----	100	77	88.6	+1.3	105	28	72	1	32	0	68	60	.66	-1.0	.44	7	7	.0	.0	----	se.	--	----	--	11	15	5	4.9	--
Palestine	510	64	72	997.0	1,014.6	+.4	93	74	83.9	+1.7	97	28	71	4	23	0	71	72	.92	-1.8	.42	8	7	.0	.0	6.6	s.	29	se.	8	10	10	11	5.5	74
Port Arthur [4]	34	59	134	1,013.5	1,014.9	-1.0	92	78	84.8	+2.0	98	8	70	31	27	0	74	81	1.01	-5.9	.52	8	16	.0	.0	10.7	s.	38	n.	31	5	18	8	5.7	75
San Antonio [2]	794	6	51	989.2	1,013.2	-1.0	96	74	85.4	+1.6	103	31	69	2	29	0	70	70	2.35	+.2	1.70	6	8	.0	.0	8.5	s.	34	sw.	11	7	14	10	6.0	66

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR JULY 1948.—Continued

District and station	Elevation of instruments: Barometer above sea level [1]	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Averages: Mean maximum	Averages: Mean minimum	Averages: Mean	Averages: Departure from normal	Extremes: Highest	Extremes: Date	Extremes: Lowest	Extremes: Date	Greatest daily range	Total heating degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Days with 0.01 inch or more	Days with thunderstorms	Total snowfall (unmelted)	Snow, sleet, and ice on ground at end of month	Wind: Average hourly speed	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Character of day (sunrise to sunset), number of days: Clear	Partly cloudy	Cloudy	Average cloudiness, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Ft.	Ft.	Mb.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.		°F.		°F.	%	In.	In.	In.			In.	In.	m. p. h.					0–3	4–7	8–10	0–10	%
OHIO VALLEY AND TENNESSEE																																			
Chattanooga [2]	762	6	66	988.5	1,015.2	−1.4	91	69	76.9 / 80.0	+1.1 / +2.6	101	5	58	25	35	0	68	74 / 73	4.40 / 4.97	+.7 / +.7	1.63	8	12	.0	.0	6.4	s.	22	nw.	22	7	11	13	6.2 / 6.1	56
Knoxville [2]	995	27	71	980.7	1,015.6	−.7	89	69	79.2	+2.5	99	5	59	25	31	0	61	72	5.91	+1.6	1.84	10	8	.0	.0	7.2	sw.	36	sw.	27	6	15	10	5.9	55
Memphis [2]	399	5	49	1,000.4	1,014.2	−1.4	92	72	82.0	+2.1	98	7	65	2	30	0	70	72	2.39	−.8	.70	7	10	.0	.0	7.2	sw.	31	sw.	26	7	15	9	5.5	83
Nashville [2]	546	5	72	995.6	1,014.9	−1.4	92	70	80.8	+1.7	101	4	57	2	37	0	68	70	1.65	−2.2	.59	11	10	.0	.0	7.4	sw.	52	nw.	22	8	13	10	5.6	61
Lexington [2]	989	4	58	980.7	1,015.9	−.4	87	66	76.6	+.7	96	5	56	25	29	0	66	75	3.57	−.1	.81	15	8	.0	.0	----	s.	--	------	--	5	15	11	6.2	--
Louisville [2]	525	5	54	998.0	1,014.6	−1.3	89	67	78.0	+.4	98	4	55	2	38	0	66	71	3.74	.0	1.11	13	12	.0	.0	6.1	s.	31	sw.	17	3	17	11	6.6	70
Evansville [2]	431	6	40	999.3	1,014.6	−1.0	88	67	77.4	+.9	95	4	52	2	37	0	67	75	5.10	+1.7	1.68	15	12	.0	.0	6.3	sw.	29	sw.	17	5	13	13	6.3	73
Indianapolis [2]	823	5	54	985.4	1,014.6	−.3	85	64	74.5	+.2	94	6	54	1	29	0	65	75	3.36	----	1.43	13	8	.0	.0	7.8	sw.	27	w.	22	7	8	16	6.2	68
Terre Haute [2]	575	4	36	994.2	1,015.2	.0	87	64	75.6	−1.0	92	11	51	1	31	1	67	75	3.54	+.4	.95	15	15	.0	.0	6.7	s.	31	sw.	4	6	13	12	6.1	61
Cincinnati [4]	627	135	148	984.1	1,015.2	−.7	89	69	78.7	+3.6	97	4	58	2	33	0	65	74	3.51	+.2	.96	9	6	.0	.0	3.9	w.	16	nw.	6	7	15	9	5.7	67
Columbus [4]	822	90	110	985.4	1,014.6	−1.0	87	67	77.0	+2.1	94	5	58	1	28	0	64	72	5.25	+1.7	1.88	10	7	.0	.0	7.9	s.	25	s.	17	12	9	10	5.2	69
Dayton [2]	1,003	6	55	979.3	1,014.9	−.3	85	65	74.6	−.3	93	4	54	1	29	1	64	72	5.39	+2.1	1.50	12	9	.0	.0	8.6	w.	38	sw.	4	8	12	11	5.8	70
Elkins [2]	1,947	5	45	948.5	1,016.3	−.3	81	58	69.6	−.2	88	5	45	2	35	10	64	86	8.33	+3.0	1.86	19	14	.0	.0	5.1	s.	34	sw.	22	1	11	19	7.7	64
Parkersburg	637	77	84	------	------	------	86	66	75.9	+.5	94	4	53	2	32	0	66	81	6.46	+2.2	2.84	14	10	.0	.0	5.6	sw.	21	sw.	5	3	15	13	6.6	57
Pittsburgh [2]	842	39	54	984.8	1,014.9	−.7	84	64	73.8	+.8	91	4	54	8	26	0	62	73	2.83	−1.2	1.22	13	11	.0	.0	8.7	s.	35	nw.	27	4	11	16	6.8	48
LOWER LAKES																																			
Buffalo [2]	768	34	96	986.5	1,014.2	−.7	82	62	72.8 / 72.0	+1.9 / +2.0	92	12	50	2	36	4	61	70 / 70	3.10 / 2.58	−.2 / −.4	1.38	7	5	.0	.0	12.0	sw.	43	sw.	30	9	14	8	5.3 / 5.5	78
Canton	448	10	61	996.3	1,011.9	−1.6	81	60	70.1	+1.5	88	12	48	15	34	5	58	66	3.04	−.5	1.76	10	8	.0	.0	7.8	w.	23	w.	31	8	14	9	5.6	68
Oswego	335	71	85	1,001.0	1,013.2	−1.0	79	63	71.0	+1.8	88	10	56	8	26	1	60	71	2.56	−.4	1.00	8	6	.0	.0	7.2	s.	23	n.	6	11	10	10	5.0	71
Rochester [2]	523	4	69	994.9	1,013.9	−1.0	84	61	72.2	+1.5	93	12	50	2	35	1	60	68	2.36	−.6	.63	10	5	.0	.0	8.7	sw.	31	w.	30	11	12	8	5.0	78
Syracuse [2]	596	5	57	992.6	1,013.5	−1.4	84	60	71.9	+2.6	94	12	50	15	37	1	61	70	2.05	−1.6	1.01	10	6	.0	.0	8.2	sw.	29	nw.	27	6	15	10	5.9	63
Erie [4]	714	57	81	988.8	1,014.6	.0	80	66	73.0	+2.0	90	30	56	2	21	3	62	74	4.22	+1.2	1.49	11	11	.0	.0	7.0	w.	20	w.	30	13	10	8	4.6	54
Cleveland [2]	762	27	54	987.1	1,013.9	−.3	85	64	74.4	+2.5	94	4	54	2	31	2	62	69	3.73	+.3	2.28	9	6	.0	.0	8.5	s.	32	w.	20	9	11	11	5.4	64
Sandusky	629	5	67	991.5	1,014.2	−1.4	84	66	75.0	+1.6	92	17	56	24	27	0	----	--	3.46	.0	1.63	9	6	.0	.0	7.7	sw.	22	sw.	27	14	12	5	4.6	70
Toledo [2]	628	5	47	991.5	1,014.2	−1.4	84	63	73.6	+1.8	92	11	53	1	30	1	64	72	2.72	−.3	.90	9	5	.0	.0	8.7	sw.	29	w.	30	7	13	11	5.7	69
Fort Wayne [2]	857	5	34	983.7	1,014.2	−1.4	84	63	73.6	+1.2	92	10	50	8	35	2	63	71	5.14	+1.5	2.41	10	8	.0	.0	6.9	sw.	26	se.	13	8	14	9	5.5	75
Detroit [2]	730	5	77	988.5	1,014.2	−1.4	84	64	73.7	+2.7	93	4	55	8	28	0	61	67	2.27	−1.0	.76	9	5	.0	.0	8.3	w.	27	s.	11	7	16	8	5.5	67
UPPER LAKES																																			
Alpena	609	5	89	991.5	1,013.9	−1.3	77	59	69.8 / 68.0	+1.9 / +2.1	91	5	52	1	30	23	57	70 / 71	2.39 / 1.60	−.7 / −1.2	.38	10	6	.0	.0	9.3	se.	26	se.	22	10	16	5	5.3 / 4.9	72
Escanaba	612	51	72	990.9	1,012.9	−2.0	75	59	67.0	+1.0	96	5	43	1	30	30	58	73	3.31	.0	.94	12	6	.0	.0	9.6	s.	31	s.	30	11	13	7	5.0	73
Grand Rapids [4]	707	70	244	989.2	1,013.9	−2.0	84	64	74.0	+1.7	96	11	51	1	28	4	59	66	2.07	−.8	.77	9	7	.0	.0	9.8	sw.	34	sw.	30	10	12	9	4.9	78
Lansing [4]	878	5	90	982.7	1,013.9	−1.3	84	61	72.2	+.6	92	11	48	1	32	8	60	67	1.65	−1.4	.64	9	7	.0	.0	7.9	w.	29	w.	30	8	14	9	5.3	78
Marquette	734	44	73	986.1	1,012.9	−2.0	76	58	67.2	+2.3	96	9	49	1	31	53	55	68	2.14	−1.0	.89	9	5	.0	.0	7.9	w.	28	w.	30	6	17	8	5.5	66
Sault Sainte Marie [2]	614	10	52	990.9	1,013.2	−1.7	77	53	65.0	+2.3	90	10	43	1	35	60	56	75	2.09	−.6	.74	9	6	.0	.0	9.8	w.	41	nw.	30	8	13	10	5.8	67
Chicago [2]	673	5	38	989.8	1,013.9	−1.7	85	65	74.8	+2.1	93	3	53	1	30	1	62	67	3.18	−.2	1.07	8	6	.0	.0	7.7	sw.	25	s.	25	8	11	12	5.7	70
Green Bay	617	5	32	990.9	1,013.5	−1.1	82	60	71.3	+1.3	94	5	45	1	33	5	58	66	2.35	−1.1	.58	10	9	.0	.0	7.7	se.	24	sw.	30	9	14	8	5.2	76
Milwaukee [2]	681	33	66	989.2	1,013.5	−1.7	82	62	72.2	+4.0	92	3	50	1	32	4	61	69	2.16	−.7	1.26	9	4	.0	.0	10.9	sw.	33	sw.	30	11	11	9	5.1	61
Duluth [4]	1,133	5	47	962.1	1,012.9	−1.7	75	56	65.8	+1.9	94	5	45	1	26	61	56	74	3.38	−.4	.93	13	6	.0	.0	11.1	ne.	34	w.	30	11	13	7	5.2	64
NORTH DAKOTA																																			
Fargo [2]	940	5	47	977.0	1,010.5	−3.0	83	60	70.2 / 71.2	+1.8 / +3.1	101	6	50	23	32	8	60	67 / 70	3.37 / 4.10	+.8 / +.7	1.59	9	7	.0	.0	11.6	s.	48	nw.	29	6	16	9	5.3 / 5.8	60
Bismarck [2]	1,677	5	41	951.9	1,011.2	−2.3	84	59	71.6	+2.2	104	6	47	27	38	9	58	68	2.35	+.1	1.42	8	8	.0	.0	9.9	nw.	40	nw.	29	10	13	8	5.1	66
Devils Lake	1,478	11	44	958.7	1,011.2	−2.3	80	58	68.8	+1.4	98	7	49	18	32	37	58	67	2.67	+.1	1.10	10	6	.0	.0	8.2	se.	26	nw.	26	12	10	9	5.1	68
Williston	1,878	42	50	944.8	1,010.2	−2.3	81	58	69.4	+.5	99	5	49	27	43	18	54	62	4.37	+2.5	1.28	10	10	.0	.0	7.4	w.	44	w.	24	13	9	9	5.2	84
UPPER MISSISSIPPI																																			
Minneapolis-St. Paul [2]	919	43	74	979.0	1,011.5	−2.4	86	64	75.9 / 75.2	+1.2 / +2.9	101	6	51	23	32	5	61	70 / 64	4.44 / 1.34	+.9 / −2.4	.49	6	7	.0	.0	10.7	se.	36	w.	20	12	12	7	5.4 / 4.8	69
La Crosse [2]	672	5	29	986.8	1,012.5	−1.4	86	62	73.6	+1.8	95	2	44	1	36	6	62	67	.84	−3.1	.51	8	6	.0	.0	8.2	s.	26	nw.	29	13	10	8	4.9	76
Madison [2]	974	27	39	979.3	1,013.5	−1.7	86	61	73.8	+1.7	97	11	45	1	36	3	60	64	2.55	−1.3	1.76	7	7	.0	.0	9.5	w.	33	w.	30	11	11	9	5.1	75
Charles City	1,015	10	51	977.7	1,013.5	−1.4	86	63	74.2	+1.9	100	6	51	23	32	1	----	--	1.44	−2.3	.67	8	6	.0	.0	5.7	s.	21	s.	1	14	9	8	4.4	68
Moline [2]	606	6	50	992.2	1,014.2	−1.0	86	64	75.1	+1.6	98	6	49	1	34	0	64	71	8.27	+4.9	3.45	12	10	.0	.0	7.3	sw.	35	w.	22	9	9	13	5.7	71
Des Moines [4]	860	5	99	------	1,013.9	−.3	88	66	77.0	+1.6	100	6	54	23	29	0	65	72	5.35	+1.8	1.68	9	10	.0	.0	7.6	se.	27	nw.	26	9	9	13	5.8	71
Dubuque	699	60	79	988.5	1,013.2	−1.7	86	66	75.9	+1.8	97	6	52	1	30	0	63	68	2.20	−1.7	1.09	6	7	.0	.0	4.9	nw.	17	se.	29	11	9	11	5.2	85
Burlington [2]	702	4	36	989.2	1,014.2	−1.0	86	64	75.4	−.4	97	6	52	1	32	0	66	76	7.63	+4.1	3.30	12	13	.0	.0	7.3	s.	42	nw.	21	8	8	15	6.0	72
Cairo	357	5	99	1,002.0	1,014.6	−.6	90	71	80.8	+.2	95	4	62	2	28	0	----	--	3.77	+.7	.98	10	12	.0	.0	6.3	sw.	27	sw.	12	7	15	9	5.8	80
Peoria [2]	609	7	26	992.6	1,014.6	−1.3	85	65	74.8	−.4	95	6	52	1	29	0	65	74	8.18	+4.6	3.19	11	11	.0	.0	7.1	sw.	26	w.	21	8	9	14	5.9	65
Springfield, Ill. [4]	636	5	191	992.6	1,014.2	−.7	86	66	75.7	+1.7	94	6	53	1	30	1	66	76	4.42	+1.6	1.51	11	10	.0	.0	8.1	s.	50	nw.	25	7	11	13	6.0	70
St. Louis [4]	568	33	59	994.2	1,014.2	−1.4	88	71	79.2	+.4	94	6	62	23	24	0	----	72	7.30	+4.3	3.50	12	11	.0	.0	8.6	s.	36	nw.	19	10	11	10	----	71
MISSOURI VALLEY																																			
Columbia, Mo. [4]	784	6	66	986.1	1,013.9	−1.0	87	69	77.2 / 78.1	+1.5 / +.8	96	6	56	24	26	0	68	71 / 78	4.60 / 6.35	+.9 / +2.9	2.43	12	14	.0	.0	5.5	s.	23	w.	22	10	13	8	5.2 / 5.4	56
Kansas City [2]	963	38	76	980.0	1,013.9	−.3	89	70	79.5	+1.4	98	7	58	23	25	0	67	71	7.29	+3.5	1.38	12	11	.0	.0	9.3	sw.	34	nw.	21	7	14	10	6.0	66
St. Joseph [2]	967	5	51	1,008.1	1,013.2	−.7	88	68	78.4	+1.0	96	8	56	23	27	0	68	76	6.82	+3.0	3.13	14	15	.0	.0	6.5	s.	38	nw.	29	9	11	11	5.5	54
Springfield, Mo. [2]	1,324	5	50	968.2	1,014.6	−1.0	86	67	76.2	.0	92	25	58	1	25	0	68	80	5.08	+.9	1.56	12	16	.0	.0	9.2	s.	40	w.	16	7	13	11	6.0	74
Topeka [4]	987	65	87	978.3	1,013.2	−.7	90	69	79.6	+1.8	99	7	58	23	28	0	68	76	5.81	+1.5	1.90	13	13	.0	.0	7.1	s.	24	n.	19	8	11	12	5.9	74
Lincoln [4]	1,189	6	81	970.9	1,012.9	−.6	89	67	78.2	+1.7	98	5	52	23	32	0	64	68	2.50	−1.4	1.43	3	6	.0	.0	8.0	s.	25	s.	1	11	13	7	5.0	79
Norfolk, Nebr. [2]	1,551	5	38	958.3	1,012.9	------	88	64	75.8	+.1	99	1	49	23	33	2	62	66	4.02	+.6	2.19	8	8	.0	.0	----	s.	--	------	--	15	10	6	4.3	--
Omaha [2]	1,105	5	68	973.9	1,012.9	−1.0	89	67	78.1	+2.9	99	6	54	23	31	0	64	68	5.91	+2.4	3.22	9	9	.0	.0	9.7	s.	34	sw.	1	10	13	8	5.3	74
Valentine	2,598	46	54	922.5	1,012.2	−2.0	88	62	74.8	+1.1	102	1	51	30	37	4	56	59	1.89	−1.1	.49	7	10	.0	.0	8.7	s.	31	sw.	28	16	10	5	3.9	85
Sioux City [2]	1,138	5	40	972.2	1,011.2	−2.7	89	64	76.3	+3.0	100	6	50	23	36	1	62	70	3.19	−.4	1.57	8	6	.0	.0	9.1	s.	31	sw.	1	12	10	9	5.0	--
Huron [2]	1,301	5	41	965.5	1,011.2	−2.7	86	62	74.1	+2.3	99	5	51	23	36	1	62	72	1.69	−1.5	.52	10	8	.0	.0	11.7	se.	34	s.	29	13	10	8	5.0	76

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR JULY 1948.—Continued

District and station	Elevation of instruments: Barometer above sea level [1]	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Averages: Mean maximum	Averages: Mean minimum	Averages: Mean	Averages: Departure from normal	Extremes: Highest	Extremes: Date	Extremes: Lowest	Extremes: Date	Extremes: Greatest daily range	Total heating degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Precipitation: Days with thunderstorms	Precipitation: Total snowfall (unmelted)	Precipitation: Snow, sleet, and ice on ground at end of month	Wind: Average hourly speed	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Character of day (sunrise to sunset), number of days: Clear	Partly cloudy	Cloudy	Average cloudiness, tenths (sunrise to sunset)	Possible sunshine
NORTHERN SLOPE	Ft.	Ft.	Ft.	Mb.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.		°F.		°F.	%	In.	In.	In.			In.	In.	m. p.h.					0-3	4-7	8-10	0-10	%
									67.8	−.8								58	2.36	+.8														4.7	
Billings [2]	3,570	16	39	890.3	1,011.5	−2.7	84	57	70.4	−1.6	99	5	46	29	41	10	48	50	.95	-----	.41	10	11	.0	.0	9.9	sw.	61	nw.	1	13	15	3	4.2	80
Butte	5,533	44	58	831.0	1,015.9	-----	74	43	58.5	−5.4	87	22	34	25	46	209	43	62	2.44	+1.1	.44	15	13	.0	.0	----	s.	--	------	--	9	13	9	5.2	--
Glasgow	2,086	34	53	938.4	1,011.2	-----	85	57	71.0	−.2	105	6	46	30	43	7	52	56	2.23	+.8	.53	14	9	.0	.0	----	nw.	--	------	--	12	11	8	5.0	--
Great Falls [2]	3,657	16	75	888.3	1,012.9	-----	78	54	66.4	−2.8	94	27	46	28	46	39	46	54	2.28	+.8	.83	10	8	.0	.0	11.4	sw.	63	sw.	23	9	17	5	4.8	77
Havre	2,507	11	67	924.8	1,012.5	−.7	83	56	69.3	+1.0	100	5	44	29	40	16	47	52	1.99	+.1	.87	11	9	.0	.0	8.4	w.	40	nw.	27	12	12	7	4.7	82
Helena [2]	4,124	5	43	874.0	1,013.9	.0	78	50	64.0	−1.7	89	27	43	28	41	60	47	60	1.85	+.7	.60	13	13	.0	.0	8.1	w.	43	sw.	1	9	16	6	4.9	75
Missoula [2]	3,263	4	32	901.5	1,014.2	−.7	78	48	63.5	−3.3	95	22	42	13	43	72	48	62	1.50	+.7	.75	7	8	.0	.0	6.6	nw.	35	nw.	1	8	17	6	5.3	67
Kalispell	2,973	48	56	911.3	1,012.9	−.3	74	50	61.8	−2.3	85	22	42	8	35	112	49	66	3.15	+2.0	1.08	12	11	.0	.0	5.6	w.	26	sw.	23	10	14	7	5.2	79
Miles City [2]	2,371	5	28	929.2	1,011.5	−1.7	85	58	71.6	-----	103	6	44	19	45	7	54	58	4.58	-----	2.12	14	14	.0	.0	----	nw.	--	------	--	13	11	7	4.4	--
Rapid City [2]	3,259	5	56	900.8	1,011.9	−2.3	84	57	70.8	−.2	98	5	49	30	35	6	55	63	2.65	+.6	.67	7	12	.0	.0	11.8	nw.	56	nw.	24	11	15	5	4.6	76
Cheyenne [2]	6,094	22	40	814.8	1,012.2	−2.0	82	53	67.8	+1.1	89	4	43	30	38	14	46	56	2.34	+.2	.98	10	17	.0	.0	9.5	w.	35	w.	25	8	21	2	5.1	62
Lander [2]	5,352	6	30	835.8	1,011.9	−1.6	85	55	70.0	+2.6	94	10	47	29	37	17	40	41	.99	+.3	.62	6	10	.0	.0	8.6	sw.	44	w.	6	17	14	0	3.2	80
Sheridan [2]	3,790	5	38	883.5	1,018.3	-----	83	54	68.8	+.4	100	5	47	17	44	22	52	60	2.98	+1.8	2.28	10	13	.0	.0	8.1	nw.	45	nw.	1	14	14	3	4.3	74
North Platte [4]	2,821	11	51	915.7	1,011.9	−2.0	87	62	74.9	+2.0	98	1	52	23	33	0	58	65	3.12	+.4	1.17	10	11	.0	.0	6.6	s.	34	sw.	28	13	15	3	4.5	80
MIDDLE SLOPE																																			
									77.8	+.1								66	3.80	+.9														4.9	
Denver [4]	5,292	106	113	839.1	1,011.5	−2.7	87	61	74.2	+2.0	93	13	55	30	33	0	46	46	.93	−.8	.58	4	11	.0	.0	7.7	s.	33	nw.	31	11	16	4	4.4	78
Pueblo [2]	4,690	5	36	857.1	1,011.5	−1.7	91	60	75.4	+1.2	97	8	54	1	40	0	52	54	.51	−1.4	.40	5	14	.0	.0	7.4	nw.	35	nw.	3	17	13	1	3.5	83
Concordia	1,392	50	58	964.1	1,012.5	−1.4	86	68	77.4	−.6	93	18	55	23	25	0	66	71	6.38	+2.6	3.32	9	10	.0	.0	7.5	s.	30	w.	19	16	12	3	3.9	69
Dodge City [2]	2,509	5	58	926.5	1,011.9	−1.6	90	65	77.4	−1.0	98	28	60	17	30	0	62	65	5.25	+2.1	1.90	12	13	.0	.0	14.7	se.	55	nw.	16	8	23	0	4.5	73
Wichita [2]	1,358	52	64	965.5	1,012.5	−1.0	88	68	78.2	−1.2	97	14	60	23	34	0	68	74	6.39	+3.0	1.85	15	15	.0	.0	12.7	s.	80	n.	14	7	16	8	5.7	67
Oklahoma City [4]	1,214	10	47	970.5	1,012.9	−1.0	91	72	81.6	+1.0	97	27	64	31	24	0	70	76	3.54	+.7	.80	11	10	.0	.0	7.9	s.	26	ne.	7	6	16	9	5.7	66
Tulsa [2]	674	10	60	989.5	1,013.2	-----	90	71	80.2	−.9	98	27	64	31	24	0	72	78	3.61	+.4	1.25	10	14	.0	.0	8.9	s.	42	se.	14	5	13	13	6.3	48
SOUTHERN SLOPE																																			
									82.0	+.5								62	2.54	+.1														5.1	
Abilene [2]	1,755	4	59	952.6	1,011.9	−1.3	96	73	84.2	+3.1	103	26	65	1	30	0	66	62	1.65	−.5	.72	10	8	.0	.0	13.0	s.	41	se.	4	10	11	10	5.4	69
Amarillo [2]	3,604	5	42	889.3	1,011.2	−2.7	92	65	78.8	+2.9	100	29	60	31	33	0	61	62	1.52	−1.3	.85	9	15	.0	.0	14.2	s.	59	sw.	16	8	20	3	5.2	71
Del Rio	960	63	71	978.7	1,011.2	−1.3	93	74	83.6	−2.7	100	26	65	10	31	0	68	66	6.19	+3.8	4.95	7	7	.0	.0	9.3	se.	40	n.	10	12	11	8	5.0	77
Roswell	3,614	6	29	891.0	1,010.5	−2.0	94	64	79.2	+.3	101	9	58	2	37	0	56	56	1.89	−.4	.88	6	16	.0	.0	8.0	se.	42	e.	10	9	18	4	4.7	77
Wichita Falls	1,030	4	49	976.3	1,011.5	-----	95	74	84.4	−1.2	102	29	66	5	26	0	68	66	1.47	−.9	.73	8	6	.0	.0	----	------	--	------	--	9	14	8	----	--
SOUTHERN PLATEAU																																			
									83.0	+1.5								38	1.01	−.6														3.7	
El Paso [2]	3,916	35	85	884.9	1,008.8	−1.7	96	71	83.2	+3.5	105	9	66	2	31	0	54	42	.82	−1.2	.44	5	13	.0	.0	10.2	se.	42	nw.	10	17	10	4	3.7	84
Albuquerque [2]	5,314	5	45	838.8	1,009.1	−1.7	93	66	79.6	+2.9	100	13	61	3	33	0	46	38	.46	−1.0	.29	6	8	.0	.0	8.7	se.	43	e.	10	17	10	4	3.9	80
Flagstaff	6,907	34	48	793.8	1,014.9	-----	84	49	66.7	+1.0	91	15	43	3	46	7	37	40	.73	−2.2	.33	6	7	.0	.0	----	w.	--	------	--	15	9	7	4.4	--
Phoenix [4]	1,107	39	87	969.5	1,007.1	−1.0	105	78	91.1	+1.3	112	15	72	9	36	0	52	31	.79	−.3	.52	2	2	.0	.0	6.9	w.	23	e.	24	18	9	4	3.8	88
Tucson [2]	2,555	5	39	923.1	1,008.5	−.3	100	73	86.8	+.4	108	8	65	19	38	0	53	38	3.02	+.8	1.87	5	5	.0	.0	6.7	nw.	36	nw.	19	15	6	10	4.6	79
Yuma	142	9	54	1,002.0	1,006.8	−1.0	106	75	90.8	.0	113	15	66	4	41	0	56	38	.22	.0	.22	2	0	.0	.0	6.3	s.	21	se.	20	27	2	2	1.6	97
MIDDLE PLATEAU																																			
									71.7	+1.0								33	.25	−.2														2.2	
Ely [2]	6,262	8	41	809.7	1,011.9	-----	87	46	66.2	+2.7	92	10	30	29	55	35	30	26	T	−.6	T	0	2	.0	.0	12.4	s.	40	s.	4	24	7	0	2.1	95
Reno [2]	4,527	20	52	861.5	1,012.2	−.3	90	46	67.8	−.3	99	15	36	5	51	33	38	38	.00	−.2	.00	0	0	.0	.0	8.3	s.	38	w.	4	28	3	0	1.5	93
Winnemucca	4,339	5	56	866.2	1,010.5	−2.0	91	53	71.9	+1.3	98	22	40	5	47	10	37	31	T	−.2	T	0	2	.0	.0	7.4	sw.	36	sw.	1	26	5	0	1.5	91
Salt Lake City [2]	4,357	32	58	865.6	1,009.5	−2.4	91	60	75.7	+1.7	100	10	45	29	40	6	41	33	.39	−.1	.22	5	5	.0	.0	10.2	se.	35	sw.	19	24	6	1	2.5	84
Grand Junction [2]	4,602	5	26	859.5	1,011.2	−1.7	93	61	77.1	−.6	98	13	53	9	43	0	41	35	.86	+.2	.62	7	10	.0	.0	9.6	se.	34	w.	24	19	9	3	3.5	--
NORTHERN PLATEAU																																			
									66.2	−2.4								52	.84	−.1														3.9	
Baker [4]	3,471	36	54	895.4	1,014.6	−.3	78	48	63.4	−2.2	95	22	40	2	42	95	47	62	.70	+.1	.23	10	8	.0	.0	6.0	n.	27	sw.	31	14	14	3	4.0	73
Meacham [2]	4,056	7	28	877.8	1,016.6	-----	72	46	59.2	-----	83	21	37	2	34	196	44	60	1.36	-----	.43	8	5	.0	.0	----	nw.	--	------	--	14	10	7	4.2	--
Boise [2]	2,739	5	49	917.7	1,011.5	−1.0	86	54	70.4	−2.1	99	22	45	28	39	8	43	42	.08	−.2	.06	2	2	.0	.0	9.4	nw.	38	nw	27	17	12	2	3.1	88
Lewiston	1,436	4	23	962.8	1,013.5	-----	83	54	68.8	-----	94	17	46	8	37	19	48	53	2.05	-----	.87	5	2	.0	.0	----	e.	--	------	--	15	10	6	4.2	--
Pocatello [2]	4,478	5	31	862.2	1,011.5	−.7	87	53	70.0	−.2	95	10	46	4	45	8	39	35	.01	−.8	.01	1	3	.0	.0	9.5	sw.	35	sw.	27	22	8	1	2.7	86
Ellensburg [2]	1,735	5	58	953.3	1,014.6	-----	80	51	65.3	−2.9	95	31	38	8	43	65	46	54	.49	+.2	.43	4	3	.0	.0	----	nw.	--	------	--	17	12	2	3.8	--
Lacrosse	1,544	5	43	959.0	1,013.9	-----	82	49	65.6	-----	94	17	40	2	46	55	48	58	1.52	-----	.67	9	4	.0	.0	----	sw.	--	------	--	13	13	5	4.4	--
Spokane [2]	1,929	6	51	945.8	1,014.2	+.7	78	52	65.1	−3.9	89	17	43	8	33	64	47	56	1.29	+.6	.54	7	2	.0	.0	7.0	sw.	26	sw.	27	11	13	7	4.9	87
Yakima [2]	1,076	4	54	976.0	1,014.2	+.3	86	50	68.0	−3.4	98	31	40	8	45	34	48	52	.07	−.2	.05	3	3	.0	.0	----	nw.	--	------	--	17	11	3	3.8	--

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR JULY 1948.—Continued

District and station	Elevation of instruments: Barometer above sea level [1]	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Averages: Mean maximum	Temperature of the air: Averages: Mean minimum	Temperature of the air: Averages: Mean	Temperature of the air: Averages: Departure from normal	Temperature of the air: Extremes: Highest	Temperature of the air: Extremes: Date	Temperature of the air: Extremes: Lowest	Temperature of the air: Extremes: Date	Temperature of the air: Extremes: Greatest daily range	Total heating degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Precipitation: Days with thunderstorms	Precipitation: Total snowfall (unmelted)	Precipitation: Snow, sleet, and ice on ground at end of month	Wind: Average hourly speed	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Character of day (sunrise to sunset), number of days: Clear	Character of day (sunrise to sunset), number of days: Partly cloudy	Character of day (sunrise to sunset), number of days: Cloudy	Average cloudiness, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Ft.	Ft.	Mb.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.		°F.		°F.	%	In.	In.	In.			In.	In.	m. p.h.					0-3	4-7	8-10	0-10	%
NORTH PACIFIC									63.6	−.7								69	.96	+.4														5.2	
Kelso [2]	750	38	76	----	----	----	75	50	62.6	----	86	30	40	2	37	98	54	76	.74	----	.39	7	1	.0	.0	----	nw.	--	----	--	10	8	13	6.1	---
North Head	211	5	55	1,010.5	1,018.0	−1.0	62	54	58.2	+1.0	66	11	51	1	12	210	54	87	.74	−.2	.33	10	0	.0	.0	13.8	nw.	34	s.	5	5	9	17	6.7	46
Seattle [4]	125	90	321	1,012.5	1,017.3	−.7	74	55	64.4	−1.1	86	31	49	2	28	52	53	72	1.81	+1.2	.53	9	0	.0	.0	7.2	s.	27	w.	26	10	6	15	6.0	45
Tacoma	194	172	201	1,010.2	1,016.9	−1.1	72	54	63.2	+.4	85	31	47	2	27	79	----	--	3.00	+2.4	1.06	9	3	.0	.0	7.3	n.	24	sw.	7	11	11	9	5.3	53
Tatoosh Island	86	5	61	1,014.6	1,017.6	−1.4	60	52	56.0	+.9	69	30	49	1	18	285	53	90	1.29	−.2	.43	12	0	.0	.0	9.2	s.	26	s.	10	3	6	22	7.5	39
Burns	4,162	35	47	873.0	1,013.5	----	81	49	64.9	−1.7	94	31	35	6	40	80	40	43	.54	+.1	.31	4	3	.0	.0	----	n.	--	----	--	18	8	5	3.5	---
Eugene [2]	433	4	35	1,003.4	1,016.9	----	80	50	64.8	----	91	16	42	4	40	52	52	67	.49	----	.37	3	0	.0	.0	----	n.	--	----	--	14	8	9	4.5	---
Medford [2]	1,329	29	58	967.8	1,014.9	+.7	84	52	68.4	−4.3	98	29	44	2	50	27	50	57	.38	+.1	.26	2	1	.0	.0	----	nw.	--	----	--	23	4	4	2.8	---
Portland, Oreg. [4]	154	68	106	1,011.9	1,017.6	+.3	77	57	66.8	+.1	92	31	48	2	28	32	53	66	.32	−.3	.18	6	0	.0	.0	6.0	nw.	20	w.	27	11	5	15	5.6	65
Roseburg	510	45	76	998.3	1,016.6	.0	80	53	66.6	−.8	92	30	47	7	37	36	51	62	.29	.0	.22	2	0	.0	.0	5.5	n.	20	n.	14	16	10	5	3.6	74
MIDDLE PACIFIC COAST																																			
									67.4	+.4								64	.12	+.1													3.2	
Eureka	60	72	88	1,015.2	1,017.6	−.4	61	52	56.4	+.9	67	9	47	2	16	266	52	85	.25	+.1	.22	3	0	.0	.0	6.9	nw.	27	n.	28	6	11	14	6.2	47
Red Bluff [2]	353	5	26	998.3	1,010.8	----	95	66	80.2	−.6	110	15	54	4	39	3	48	36	.22	+.2	.22	2	2	.0	.0	7.5	se.	25	se.	4	27	3	1	1.7	96
Sacramento [4]	66	92	115	1,008.8	1,011.2	−.3	90	58	73.8	+.6	107	15	52	4	40	7	52	55	.00	.0	.00	0	0	.0	.0	8.2	s.	21	s.	4	28	2	1	.8	94
San Francisco [4]	155	112	132	1,008.1	1,013.9	−.3	65	54	59.3	+.8	83	14	51	19	27	180	52	78	.02	.0	.02	1	0	.0	.0	11.0	w.	27	w.	28	13	12	6	4.2	58
SOUTH PACIFIC COAST																																			
									72.7	−.6								61	T	.0													2.6	
Fresno [2]	327	5	34	998.6	1,009.8	−1.0	98	62	80.2	−1.1	110	16	52	5	41	0	51	41	.00	.0	.00	0	0	.0	.0	7.4	nw.	24	nw.	4	31	0	0	1.0	100
Los Angeles	338	236	263	1,000.3	1,012.5	−.7	82	60	71.0	+.8	90	10	55	7	32	0	56	66	T	.0	T	0	0	.0	.0	5.3	w.	17	w.	7	23	7	1	2.6	80
San Diego [2]	87	20	55	1,009.5	1,012.5	−.4	74	60	67.0	−1.5	80	9	55	5	23	2	57	75	T	.0	T	0	0	.0	.0	6.6	nw.	17	nw.	6	12	16	3	4.2	66
WEST INDIES																																			
San Juan, P. R.	82	9	54	1,013.2	1,015.9	----	84	76	80.1	.0	86	6	72	11	12	0	75	84	10.92	+5.0	2.01	25	10	.0	.0	13.1	e.	33	e.	15	0	16	15	7.2	39
PANAMA CANAL																																			
Balboa Heights [6]	118	6	92	----	1,010.0	----	87	74	80.4	----	93	18	72	3	19	0	----	89	6.39	----	2.30	16	11	.0	.0	4.6	nw.	33	s.	2	0	8	23	----	33
Cristobal [6]	27	37	92	----	1,010.4	----	84	76	79.9	----	90	14	72	27	15	0	----	87	15.82	----	2.37	25	9	.0	.0	6.7	s.	23	sw.	21	0	7	24	----	14
ALASKA																																			
Anchorage [2]	132	6	44	1,007.8	1,012.5	----	64	48	56.2	−.8	74	14	39	28	25	272	48	76	3.28	+1.6	1.06	20	0	.0	.0	6.0	s.	31	s.	23	2	4	25	8.5	---
Annette Island	113	5	53	1,013.2	1,017.3	----	64	52	58.2	+.3	76	5	49	29	26	209	52	83	3.12	−2.4	1.30	11	0	.0	.0	----	se.	--	----	--	1	8	22	7.7	---
Barrow	29	5	27	1,008.8	1,008.8	----	47	34	40.5	+.6	70	17	29	2	31	763	38	93	.88	.0	.56	12	0	1.2	.0	10.0	sw.	27	sw.	5	0	6	25	8.5	---
Bethel [2]	28	5	31	1,009.1	1,010.5	----	57	46	51.4	+7.8	78	15	37	9	31	420	46	86	2.00	−.3	.44	21	1	.0	.0	10.4	sw.	--	----	--	0	5	26	9.0	---
Cordova [2]	45	5	32	1,012.1	1,012.2	----	60	45	52.6	−.7	67	4	39	21	28	386	50	90	9.69	+4.5	1.95	21	0	.0	.0	----	e.	--	----	--	2	8	21	8.1	---
Fairbanks [2]	455	5	63	992.9	1,009.8	----	68	48	58.0	−2.0	83	17	41	29	35	223	50	75	4.24	+2.4	2.16	14	4	.0	.0	6.4	sw.	24	sw.	3	1	9	21	7.7	---
Galena	139	4	66	1,002.7	1,007.5	----	62	50	55.8	−4.7	76	15	44	9	22	285	46	72	4.38	+1.5	2.34	16	0	.0	.0	----	s.	30	se.	4	2	3	26	8.4	---
Gambell	32	5	32	1,005.4	1,006.4	----	47	41	43.8	−1.5	57	17	36	29	12	657	42	93	2.55	+1.0	----	16	----	.0	.0	14.0	sw.	44	ne.	23	0	2	29	9.0	---
Juneau [2]	80	6	30	1,014.6	1,015.2	----	66	48	56.9	+1.4	80	6	42	1	34	254	48	75	5.54	+1.3	.96	14	0	.0	.0	7.6	n.	23	se.	29	2	9	20	7.6	---
Kotzebue [2]	20	5	31	1,007.1	1,007.8	----	56	46	51.0	−2.0	68	23	36	31	20	429	47	86	2.17	+.6	.54	19	0	.0	.0	12.2	se.	34	se.	4	0	2	29	8.8	---
McGrath [2]	341	5	31	998.0	1,010.5	----	63	48	55.2	−3.4	79	15	37	30	28	308	47	76	3.35	+.9	.98	24	0	.0	.0	----	s.	22	s.	7	0	4	27	8.6	---
Nome [2]	22	10	75	1,006.4	1,007.1	----	52	42	46.8	−3.1	63	15	37	5	15	545	46	92	3.89	+1.4	.84	21	0	.0	.0	12.1	sw.	34	e.	4	1	1	29	8.8	---
Northway [2]	1,718	5	32	948.9	1,011.2	----	70	48	59.4	+.1	83	17	42	31	34	179	46	66	1.91	−.6	.82	11	4	.0	.0	5.9	nw.	24	w.	21	1	10	20	7.5	---
HAWAII																																			
Honolulu [4]	38	86	98	1,015.6	1,016.9	----	82	74	77.8	+.1	84	13	71	8	11	0	66	67	.71	−.5	.20	14	0	.0	.0	10.2	ne.	25	ne.	11	14	13	4	4.5	70

[1] Height of barometer cistern above mean sea level on January 1, 1900, or when station was first established since January 1, 1900. When station is moved to new location or airport, the pressure is reduced to the original elevation for homogeneity. These elevations do not represent the present station elevation in most cases.

[2] Data are from airport records. Pressures adjusted to original elevations according to note 1.

[3] Barometric, hygrometric, wind, character of day, and average cloudiness data from airport records; remainder from city office records.

[4] Barometric and hygrometric data from airport records; remainder from city office records.

[5] Barometric, temperature, degree day, and hygrometric data from airport; remainder from city office records.

[6] Bihourly hygrometric data.

NOTE.—Unless otherwise indicated, data in table are city office records.