CLIMATOLOGICAL TABLES.*

CONDENSED CLIMATOLOGICAL SUMMARY.

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

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

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

Condensed climatological summary of temperature and precipitation by sections, November, 1921.

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	58.3	+4.0	Clanton	87	18	Maple Grove	25	11†	3.63	+0.65	Mentone	7.06	Healing Springs	0.97
Arizona	52.7	+1.5	Avondale	98	3	Alpine	− 3	19	0.36	−0.53	Maricopa	7.55	12 stations	0.00
Arkansas	54.9	+3.4	Mount Ida	88	17	2 stations	17	12	5.53	+1.96	Searcy	13.77	Springbank	1.10
California	54.3	+1.4	San Bernardino	98	3	Portola	− 3	18	1.44	−1.37	Crescent City	15.09	9 stations	0.00
Colorado	37.8	+3.1	2 stations	83	3†	Lay	−17	18	0.59	−0.18	Silver Lake	2.55	4 stations	0.00
Florida	68.0	+3.2	Orlando	92	15	De Funiak Springs	29	13	2.64	+0.27	Jupiter	6.41	Homestead	0.00
Georgia	58.1	+3.4	Americus	87	18	Blue Ridge	20	13	3.87	+1.22	Ramhurst	8.48	Savannah	1.20
Hawaii	71.1	−0.4	Mahukona	92	17	Volcano Observatory	49	2†	10.49	+2.71	Honomu	59.32	2 stations	0.00
Idaho	38.2	+2.7	Bliss	77	3	Sandpoint	−10	19	2.92	+0.91	Musselshell	9.55	Murphy	0.15
Illinois	42.6	+0.7	2 stations	77	6	Freeport	7	12	3.74	+1.34	Cairo	11.18	Warsaw	0.96
Indiana	44.2	+2.1	Marion	75	18	Salamonia	11	12	5.98	+2.92	Greenfield	11.35	Notre Dame	1.91
Iowa	33.6	−1.4	4 stations	70	4†	Sanborn	− 5	20	0.58	−0.93	Clinton	1.61	7 stations	T.
Kansas	43.8	−0.5	2 stations	89	4†	4 stations	3	23	0.07	−1.11	Columbus	1.23	26 stations	0.00
Kentucky	49.7	+3.6	5 stations	79	6†	Greenville	20	12	7.96	+4.61	Blandville	13.07	Pikeville	3.78
Louisiana	63.9	+5.4	Houma	91	15	Calhoun	26	10	2.22	−1.09	Donaldsonville	5.52	2 stations	0.40
Maryland-Delaware	46.9	+2.0	2 stations	82	18	Grantsville, Md	15	13	4.30	+1.76	Bell, Md	6.59	Chewsville, Md	2.57
Michigan	33.7	−2.2	Omer	66	1	Humboldt	−16	20	2.47	−0.02	Howell	5.38	Iron River	0.30
Minnesota	23.2	−6.0	Milan	67	3†	Itasca State Park	−29	20	0.77	−0.21	Maple Plain	2.21	Fosston	0.06
Mississippi	60.2	+5.4	2 stations	89	14†	Moorhead	25	29	2.41	−1.03	Hernando	6.54	Monticello	0.22
Missouri	45.6	+1.2	Dean	84	5	Houston	10	12	2.82	+0.40	New Madrid	11.73	Kidder	0.00
Montana	30.0	−1.8	Chinook	82	5	Kinread	−42	19	1.76	+0.72	Haugan	7.05	2 stations	0.28
Nebraska	36.7	+0.2	Gothenburg	84	6	Gordon	−10	18	0.32	−0.41	Nenzel	1.05	2 stations	0.00
Nevada	44.0	+4.1	Las Vegas	86	2	Rye Patch	− 7	18	0.33	−0.34	Vya	1.65	8 stations	0.00
New England	35.4	−1.3	2 stations	75	19	Presque Isle, Me	−10	27	5.86	+2.29	Westboro, Mass	9.64	Waterbury, Conn	2.14
New Jersey	44.3	+1.2	3 stations	79	18	2 stations	18	6†	4.26	+1.17	Atlantic City	6.69	Long Branch	2.79
New Mexico	45.5	+2.3	Elephant Butte	90	2	2 stations	2	19	0.13	−0.46	Tyrone	1.27	40 stations	0.00
New York	37.4	−0.1	Townsend	78	19	Indian Lake	− 3	8	5.23	+2.44	Romulus	8.55	Ogdensburg	1.57
North Carolina	53.6	+4.4	Greenville	88	18	3 stations	18	13	3.18	+0.79	Lumberton	9.08	Tryon	1.30
North Dakota	20.9	−5.7	Bowman	69	3	Howard	−30	19	0.68	+0.10	Donnybrook	2.06	Lisbon	0.05
Ohio	42.9	+1.6	2 stations	80	18	Green Hill	13	13	5.66	+2.99	Clarington	9.91	North Bass Island	2.50
Oklahoma	52.3	+1.7	Beaver	89	6	2 stations	8	23	1.01	−1.33	Poteau	9.24	15 stations	0.00
Oregon	43.6	+1.6	Prairie City	78	3	Blitzen	2	10†	7.02	+2.72	Government Camp	23.79	Blitzen	0.23
Pennsylvania	42.3	+1.3	5 stations	80	18	West Bingham	3	13	5.75	+3.20	Clearfield	9.14	Harrisburg	2.30
South Carolina	56.9	+3.0	2 stations	86	18†	2 stations	24	13	3.11	+0.81	Clemson College	5.61	Pinopolis	1.11
South Dakota	28.7	−4.1	Spearfish	80	30	2 stations	−24	19	0.59	−0.10	Lemmon	1.50	Fairfax	0.12
Tennessee	52.0	+3.5	2 stations	81	17†	2 stations	21	11†	5.88	+2.44	Sewanee	8.50	Johnson City	3.85
Texas	62.0	+5.0	Eagle Pass	100	14	Clint	9	19†	0.95	−1.44	Denison	7.93	21 stations	0.00
Utah	41.0	+3.6	Springdale	80	3	Manila	− 5	18	0.51	−0.43	Silver Lake	1.94	2 stations	0.00
Virginia	50.0	+3.6	5 stations	82	18†	Burkes Garden	15	11†	3.03	+0.60	Mount Weather	5.08	Callaville	1.25
Washington	39.7	−0.3	2 stations	74	6	Republic	−14	19	6.51	+0.93	Silverton	26.04	Wahluke	0.92
West Virginia	46.1	+3.5	Moorefield	85	18	Pickens	11	13	5.99	+3.13	Charleston	8.81	Romney	2.52
Wisconsin	29.3	−3.9	Stevens Point	68	1	3 stations	−24	20	1.29	−0.44	Racine	2.81	Iron River	0.53
Wyoming	33.2	+0.8	Fort Laramie	81	5	South Pass City	−18	18	0.91	+0.29	Moran	3.60	Green River	0.07

* For description of tables and charts, see REVIEW, January, 1921, p. 41.

† Other dates also.

TABLE 1.—*Climatological data for Weather Bureau stations, November, 1921.*

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.												Precipitation.			Wind.										
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity.	Total.	Departure from normal.	Days with 0.01 inch or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet and ice on ground at end of month.
	Ft.	Ft.	Ft.	In.	In.	In.	°F.	°F.	°F		°F	°F.		°F	°F.	°F.	°F.	%	In.	In.		Miles								0-10	In.	In.
New England.							**38.7**	**− 0.4**										**82**	**5.35**	**+ 1.8**										**7.9**		
Eastport	76	67	85	29.95	30.04	+ .03	34.0	− 2.8	58	19	39	14	26	29	22	32	29	84	5.11	+ 1.0	20	10,730	nw.	41	ne.	28	2	4	24	8.6	16.2	8.0
Greenville, Me.	1,070	6	.....	28.86	30.07	.....	27.2	.....	52	20	33	7	23	22	21	.....	.....	.....	5.69	.....	16	.....	.....	.....	.....	.....	3	2	25	.....	44.7	.....
Portland, Me.	103	82	117	29.96	30.09	+ .05	35.3	− 2.3	57	19	40	20	27	30	22	32	28	79	6.85	+ 3.0	19	7,162	n.	42	nw.	5	4	5	21	7.9	24.3	18.0
Concord	288	70	79	29.74	30.06	.00	35.4	− 1.4	69	19	41	20	24	30	36	.....	.....	.....	4.34	+ 1.0	19	3,846	n.	34	nw.	5	5	3	22	8.3	20.1	9.8
Burlington	404	11	48	29.60	30.06	+ .01	32.7	− 1.0	70	19	38	15	8	27	23	.....	.....	.....	3.69	+ 1.1	22	7,852	s.	48	nw.	5	1	4	25	8.8	23.0	4.6
Northfield	876	12	60	29.10	30.08	+ .03	31.2	− 0.8	66	19	38	8	8	25	28	29	26	84	4.66	+ 2.1	19	4,782	s.	28	se.	19	1	4	25	8.9	35.6	11.9
Boston	125	115	188	29.92	30.06	+ .01	41.6	+ 0.4	72	19	48	25	8	35	25	38	35	80	6.19	+ 2.1	18	7,622	w.	43	w.	5	7	5	18	7.3	1.6	0.0
Nantucket	12	14	90	30.01	30.02	− .03	46.0	+ 0.8	64	19	52	33	8	41	23	43	41	85	5.25	+ 2.0	19	13,119	w.	79	ne.	29	6	2	22	7.8	T.	0.0
Block Island	26	11	46	30.01	30.04	− .02	45.2	− 0.1	64	19	50	29	8	40	20	42	39	82	6.50	+ 2.6	17	16,167	ne.	71	ne.	29	6	6	18	6.9	T.	0.0
Providence	160	215	251	29.88	30.05	− .02	41.0	+ 0.6	70	19	48	25	24	34	24	37	34	80	6.35	+ 2.4	19	9,004	nw.	67	nw.	5	9	4	17	6.8	0.5	0.0
Hartford	159	122	140	29.89	30.07	− .01	40.9	+ 1.4	70	19	47	25	24	35	29	37	34	82	5.28	+ 1.5	20	5,252	n.	39	n.	5	3	6	21	8.2	T.	0.0
New Haven	106	74	153	29.94	30.06	− .01	42.3	+ 1.0	67	19	49	27	24	36	27	38	35	80	4.65	+ 1.1	15	6,655	ne.	36	ne.	28	5	8	17	7.3	T.	0.0
Middle Atlantic States.							**46.6**	**+ 2.4**										**79**	**3.86**	**+ 1.0**										**6.8**		
Albany	97	102	115	29.96	30.07	− .01	39.0	+ 0.6	71	19	44	22	24	34	22	36	33	82	5.50	+ 2.7	17	5,360	nw.	41	s.	19	6	3	21	7.9	2.5	T.
Binghamton	871	10	84	29.09	30.04	− .05	39.7	+ 2.1	72	19	45	24	13	34	27	.....	.....	.....	5.89	+ 3.6	17	4,538	w.	28	s.	19	1	4	25	8.7	0.9	0.0
New York	314	414	454	29.71	30.06	− .03	45.0	+ 1.0	71	19	51	30	13	39	24	41	37	77	3.48	0.0	15	12,615	nw.	62	nw.	5	3	10	17	7.6	T.	0.0
Harrisburg	374	94	104	29.67	30.08	− .03	43.8	+ 2.1	76	18	50	29	13	37	30	40	35	76	3.20	+ 0.8	15	5,069	ne.	31	s.	19	3	10	17	7.6	T.	0.0
Philadelphia	117	123	190	29.94	30.08	− .02	46.8	+ 1.9	75	19	53	32	13	41	22	43	40	80	3.69	+ 0.6	16	7,399	nw.	32	nw.	5	7	7	16	6.9	T.	0.0
Reading	325	81	98	29.72	30.07	.....	43.7	.....	78	18	50	28	13	38	28	41	38	81	5.87	+ 2.8	17	2,575	nw.	20	nw.	.....	3	9	18	7.4	2.0	0.0
Scranton	805	111	119	29.18	30.06	− .03	41.2	+ 2.1	74	18	47	25	13	35	19	38	36	82	5.03	+ 2.7	18	5,366	sw.	30	w.	5	1	10	19	8.0	1.6	0.0
Atlantic City	52	37	48	30.00	30.06	− .04	48.2	+ 2.7	66	7	54	29	13	42	22	45	43	84	6.69	+ 3.5	13	5,768	nw.	28	ne.	28	10	6	14	6.2	0.0	0.0
Cape May	18	13	49	30.07	30.09	− .01	49.2	+ 1.8	65	7	55	34	13	43	23	46	43	82	3.22	0.0	15	6,902	nw.	36	nw.	5	8	8	14	6.3	0.0	0.0
Sandy Hook	22	10	55	30.03	30.05	.....	45.6	.....	69	18	51	32	13	41	20	42	39	80	2.95	.....	15	12,420	w.	50	nw.	25	6	10	14	6.5	T.	0.0
Trenton	190	159	183	29.85	30.06	.....	44.6	.....	76	18	52	27	13	38	28	41	38	81	2.83	− 0.6	15	8,619	w.	44	w.	10	4	9	17	7.1	T.	0.0
Baltimore	123	100	113	29.33	30.07	− .04	48.1	+ 2.3	75	19	55	31	13	42	26	43	39	75	4.37	+ 1.4	16	4,032	nw.	19	sw.	1	6	11	13	6.6	T.	0.0
Washington	112	62	85	29.94	30.07	− .05	47.5	+ 2.5	80	18	55	29	16	40	27	43	38	73	4.15	+ 1.4	14	4,629	n.	33	nw.	12	5	9	16	7.2	T.	0.0
Lynchburg	681	153	188	29.32	30.08	− .05	50.6	+ 4.5	75	18	60	26	13	41	40	45	40	74	1.65	− 1.1	8	5,006	w.	34	nw.	12	7	13	10	5.7	0.0	0.0
Norfolk	91	170	205	29.98	30.08	− .03	55.8	+ 4.6	77	19	63	36	13	48	24	50	47	81	1.70	− 1.0	8	8,495	ne.	37	nw.	29	13	7	10	5.1	0.0	0.0
Richmond	144	11	52	29.92	30.08	− .04	51.6	+ 2.8	79	19	62	26	13	42	33	46	43	81	2.97	+ 0.6	9	5,427	ne.	28	nw.	12	10	10	10	5.4	0.0	0.0
Wytheville	2,304	49	56	27.68	30.10	− .03	46.3	+ 3.3	72	17	56	22	13	37	33	41	37	78	1.49	− 1.6	12	5,165	w.	34	w.	28	10	5	15	6.0	T.	0.0
South Atlantic States.							**58.6**	**+ 4.5**										**80**	**2.75**	**− 0.4**										**5.2**		
Asheville	2,255	70	84	27.73	30.11	− .03	49.8	+ 4.7	75	17	59	25	13	40	37	43	39	76	2.31	− 1.0	11	6,659	nw.	39	nw.	28	10	6	14	5.7	T.	0.0
Charlotte	779	55	62	29.24	30.09	− .04	54.0	+ 3.6	75	19	63	29	13	45	30	48	44	77	4.02	+ 1.2	11	3,304	ne.	23	nw.	12	10	4	16	6.0	0.0	0.0
Hatteras	11	12	50	30.05	30.06	− .07	60.8	+ 4.1	76	18	67	44	13	55	19	57	55	84	4.73	+ 0.1	10	9,412	w.	40	nw.	29	14	6	10	4.8	0.0	0.0
Manteo	12	5	42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Raleigh	376	103	110	29.68	30.09	− .04	54.6	+ 4.4	78	19	64	29	13	45	29	49	45	79	2.13	− 0.2	9	5,204	sw.	34	w.	28	10	11	9	5.3	0.0	0.0
Wilmington	78	81	91	30.01	30.10	− .02	59.6	+ 5.5	79	17	69	32	13	50	29	54	51	82	2.22	− 0.2	6	4,606	w	24	w.	28	14	10	6	4.0	0.0	0.0
Charleston	48	11	92	30.04	30.10	− .02	62.0	+ 3.9	80	17	70	40	13	54	25	56	54	83	1.82	− 1.0	6	6,244	w.	35	w.	28	13	9	8	4.5	0.0	0.0
Columbia, S. C.	351	41	57	29.72	30.11	− .01	58.4	+ 4.6	81	18	68	35	13	48	42	51	46	76	2.47	+ 0.2	7	4,067	w.	33	w.	28	11	8	11	5.5	0.0	0.0
Due West	711	10	55	29.34	30.12	.....	54.4	.....	75	7	63	33	13	45	31	.....	.....	.....	3.03	.....	11	5,317	sw.	35	w.	28	12	4	14	5.2	0.0	0.0
Greeneville, S. C.	1,039	113	122	28.97	30.08	.....	54.0	.....	74	7	62	31	13	46	29	48	44	76	3.38	.....	10	5,303	ne.	36	w.	28	13	3	14	5.9	0.0	0.0
Augusta	180	62	77	29.89	30.09	− .04	58.4	+ 4.5	80	18	68	33	13	49	36	52	49	81	4.34	− 1.9	10	3,358	nw.	26	w.	28	9	10	11	5.7	0.0	0.0
Savannah	65	150	194	30.03	30.10	− .02	63.0	+ 5.5	82	17	72	38	13	54	29	56	53	80	1.20	− 1.2	5	7,971	w.	44	w.	28	7	13	10	4.6	0.0	0.0
Jacksonville	43	209	245	30.05	30.10	.00	65.8	+ 4.5	82	17	74	43	29	58	25	60	58	85	2.27	+ 0.1	8	7,754	sw.	40	sw.	28	15	16	9	5.2	0.0	0.0
Florida Peninsula.							**7.34**	**+ 2.3**										**76**	**1.58**	**− 0.6**										**3.8**		
Key West	22	10	64	30.03	30.05	+ .03	76.1	+ 1.8	84	9	81	57	30	72	16	70	68	78	2.67	+ 0.3	6	7,569	e.	26	e.	23	18	9	3	3.5	0.0	0.0
Miami	25	71	79	30.05	30.08	.....	75.5	+ 1.5	85	11	79	50	30	68	24	68	65	76	0.50	− 2.0	8	6,487	e.	30	e.	22	17	7	6	3.9	0.0	0.0
Sand Key	23	39	72	30.03	30.06	+ .04	75.4	.....	83	9	78	63	30	73	12	70	67	75	4.43	.....	9	11,330	e.	42	ne.	23	15	12	3	3.5	0.0	0.0
Tampa	35	79	92	30.05	30.09	+ .01	70.5	+ 3.7	84	23	79	49	13	62	27	63	60	77	1.58	− 0.1	7	4,631	ne.	26	se.	27	15	8	7	4.4	0.0	0.0
East Gulf States.							**60.5**	**+ 4.6**										**79**	**3.51**	**0.0**										**5.1**		
Atlanta	1,174	190	216	28.86	30.11	− .02	54.7	+ 2.8	75	23	63	33	11	46	27	50	46	79	6.47	+ 3.1	9	8,494	nw.	42	w.	28	11	3	16	5.9	0.0	0 0
Leesburg	279	10	56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Macon	370	78	87	29.70	30.10	− .03	58.2	+ 4.9	80	17	68	30	13	48	35	52	48	76	4.56	+ 1.5	8	3,997	nw.	24	w.	28	9	7	14	5.8	0.0	0.0
Thomasville	273	49	58	29.81	30.10	− .02	63.8	+ 5.3	83	18	73	39	13	54	30	56	53	79	3.11	+ 0.5	7	2,958	nw.	22	w.	28	8	9	13	5.7	0.0	0.0
Pensacola	56	149	185	30.04	30.10	− .01	64.2	+ 4.6	78	25	71	42	29	57	25	60	57	84	2.46	− 1.3	5	8,742	ne.	38	n.	27	13	12	5	4.5	0.0	0.0
Anniston	741	9	57	29.32	30.12	.00	55.5	+ 3.6	80	23	66	30	11	44	36	.....	.....	.....	4.35	+ 1.0	10	3,853	nw.	24	nw.	19	12	4	14	5.5	0.0	0.0
Birmingham	700	11	48	29.36	30.13	− .01	57.6	+ 3.5	80	23	68	32	12	48	32	51	47	77	2.14	− 1.2	9	4,684	s.	29	nw.	27	12	4	14	5.4	0.0	0.0
Mobile	57	125	161	30.04	30.10	− .01	63.3	+ 5.8	82	25	72	40	11	54	29	58	56	84	3.79	0.0	6	6,509	n.	34	nw.	27	10	15	5	4.5	0.0	0.0
Montgomery	223	100	112	29.88	30.13	+ .01	59.8	+ 4.1	83	16	70	37	13	50	31	54	51	80	5.77	+ 2.6	7	3,987	nw.	31	n.	14	8	10	12	5.5	0.0	0.0
Corinth	469	6	.....	.....	.....	.....	55.8	.....	81	7	68	30	12	44	41	.....	.....	.....	4.82	.....	12	.....	se.	.....	.....	.....	4	16	10	.....	0.0	0.0
Meridian	375	85	93	29.70	30.10	− .02	59.6	+ 3.4	84	14	71	33	11	48	36	52	49	78	1.23	− 2.9	7	3,400	ne.	25	w.	27	10	12	8	4.5	0.0	0.0
Vicksburg	247	65	73	29.83	30.12	.00	62.4	+ 6.5	84	16	73	36	20	52	29	54	50	73	0.85	− 3.3	3	4,692	se.	36	nw.	19	10	10	10	4.8	0.0	0.0
New Orleans	53	76	84	30.05	30.10	.00	66.6	+ 6.0	86	15	74	50	10	59	22	60	56	79	3.83	0.0	4	4,244	e.	30	w.	13	11	13	6	4.3	0.0	0.0
West Gulf States.							**61.9**	**+ 5.6**										**70**	**1.86**	**− 1.3**										**4.6**		
Shreveport	249	77	93	29.82	30.09	− .02	62.6	+ 7.3	87	16	74	35	10	51	37	54	49	71	1.52	− 2.6	2	5,248	s.	33	nw.	18	13	12	5	4.1	0.0	0.0
Bentonville	1,303	11	44	.....	.....	.....	51.0	+ 4.3	80	5	64	24	12	39	41	.....	.....	.....	1.63	.....	5	2,053	s.	12	sw.	16	13	10	7	.....	T.	0.0
Fort Smith	457	79	94	29.57	30.06	− .05	54.2	+ 4.4	82	4	65	29	10	43	41	47	42	69	5.22	+ 1.9	7	5,564	e.	40	w.	16	13	5	12	5.2	0.0	0.0
Little Rock	357	136	144	29.69	30.08	− .04	55.8	+ 4.3	81	17	66	31	12	46	32	49	44	70	3.89	− 0.7	10	6,314	s.	43	nw.	18	12	3	15	5.6	0.0	0.0
Brownsville	57	4	26	.....	.....	.....	71.8	.....	88	14	82	50	1	61	34	.....	.....	.....	1.22	.....	10	.....	sw.	.....	.....	.....	.....	.....	.....	.....	0.0	0.0
Corpus Christi	20	69	77	30.05	30.07	.00	69.2	+ 5.8	89	13	77	46	20	62	34	64	61	80	0.66	− 1.8	3	7,878	s.	58	ne.	18	14	10	6	4.3	0.0	0.0
Dallas	512	109	117	29.52	30.06	.....	61.6	.....	86	16	74	34	20	50	39	.....	.....	.....	1.19	.....	3	6,412	s.	44	s.	17	16	6	8	4.4	0.0	0.0
Fort Worth	670	106	114	29.32	30.04	− .06	61.6	+ 6.5	86	16	74	33	28	49	38	51	44	60	1.24	− 0.3	3	6,889	sw.	34	sw.	17	17	7	6	3.5	0.0	0.0
Galveston	54	106	114	.....	30.10	+ .01	67.7	+ 4.8	80	14	73	49	20	62	24	.....	.....	.....	1.61	− 2.4	4	6,997	se.	44	nw.	19	15	10	5	.....	0.0	0.0
Groesbeck	461	11	56	29.59	30.08	.....	62.7	.....	88	16	76	31	20	50	41	.....	.....	.....	0.33	.....	4	7,634	s.	43	s.	18	13	9	8	4.2	0.0	0.0
Houston	138	111	121	29.94	30.09	.....	66.7	+ 5.4	89	14	76	42	20	57	31	.....	.....	.....	1.91	.....	8	5,355	se.	38	s.	18	9	16	5	4.6	0.0	0.0
Palestine	510	64	72	29.54	30.08	− .03	63.2	+ 6.3	86	15	74	35	20	52	40	54	46	63	0.43	− 3.2	3	5,371	s.	32	s.	18	17	6	7	4.0	0.0	0.0
Port Arthur	34	58	66	30.04	30.08	.....	64.6	.....	82	14	73	42	20	59	25	60	57	83	3.84	.....	6	5,790	s.	36	n.	19	13	11	6	4.3	0.0	0.0
San Antonio	701	119	132	29.34	30.06	− .02	65.6	+ 6.4	88	14	76	38	20	55	33	57	51	66	1.16	− 0.6	3	4,460	ne.	40	nw.	18	9	11	10	5.4	0.0	0.0
Taylor	582	55	63	29.49	30.11	+ .03	63.6	+ 5.9	88	14	75	33	20	52	41	.....	.....	.....	0.97	− 1.7	7	5,399	s.	35	nw.	18	10	12	8	5.0	0.0	0.0

TABLE 1.—*Climatological data for Weather Bureau stations, November, 1921*—Continued.

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.												Precipitation.			Wind.										
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity.	Total.	Departure from normal.	Days with 0.01 inch or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet and ice on ground at end of month.
	Ft.	Ft.	Ft.	In.	In.	½n.	°F.	°F.	°F		°F	°F.		°F	°F.	°F.	°F.	%	In.	In.		Miles								0–10	In.	In.
Ohio Valley and Tennessee.							48.1	+ 3.3										79	6.12	+ 2.7										6.8		
Chattanooga	762	189	213	29.30	30.12	− .02	52.7	+ 2.4	76	17	62	30	13	43	31	48	45	80	5.39	+ 1.8	14	5,283	n.	36	w.	19	9	8	13	6.1	0.0	0.0
Knoxville	996	102	111	29.04	30.11	− .02	50.8	+ 3.7	78	18	60	28	13	42	29	46	43	80	4.74	+ 1.1	14	3,979	sw.	36	s.	17	6	6	18	6.9	T.	0.0
Memphis	399	76	97	29.69	30.12	.00	55.8	+ 4.4	80	18	65	30	12	47	30	50	44	70	4.59	0.0	13	6,381	s.	40	nw.	18	12	6	12	5.5	0.0	0.0
Nashville	546	168	191	29.51	30.10	− .02	52.4	+ 3.7	76	18	62	27	12	42	33	47	44	80	5.68	+ 1.8	12	7,440	s.	42	nw.	19	9	8	13	6.0	T.	0.0
Lexington	989	193	230	28.98	30.07	− .05	48.0	+ 3.3	74	18	56	27	12	40	30	.....	.....	.....	6.89	+ 3.4	13	11,107	sw.	56	s.	19	9	4	17	6.4	T.	0.0
Louisville	525	219	255	29.49	30.08	− .04	49.5	+ 3.2	71	19	58	26	12	41	33	45	40	75	8.32	+ 4.1	12	9,792	s.	52	n.	28	8	7	15	6.4	T.	0.0
Evansville	431	139	175	29.60	30.08	− .04	49.7	+ 4.4	72	18	58	26	12	41	29	45	40	74	9.24	+ 5.1	13	8,893	sw.	44	w.	11	8	8	14	6.1	T.	0.0
Indianapolis	822	194	230	29.15	30.05	− .05	44.5	+ 2.9	67	6	52	25	12	37	29	41	38	81	8.91	+ 5.4	12	9,096	s.	46	w.	19	5	10	15	7.0	3.8	0.0
Royal Center	736	11	55	29.23	30.04	.....	40.0	.....	64	17	48	23	15	33	28	.....	.....	.....	4.57	.....	13	7,352	sw.	34	n.	1	4	5	21	8.0	2.5	0.0
Terra Haute	575	96	129	29.41	30.03	.....	45.8	.....	69	6	54	23	12	38	29	41	37	78	5.08	.....	10	7,352	nw.	42	nw.	18	5	10	15	6.7	0.9	0.0
Cincinnati	628	11	51	29.38	30.07	− .05	45.8	+ 3.2	69	19	55	25	12	37	32	.....	40	82	5.67	+ 2.5	13	6,216	sw.	42	nw.	19	7	7	16	6.7	T.	0.0
Columbus	824	179	222	29.18	30.07	− .04	43.2	+ 1.8	69	18	51	24	12	36	28	40	38	83	5.50	+ 2.4	16	8,390	se.	53	n.	1	4	9	17	7.2	1.8	0.0
Dayton	899	181	216	29.06	30.03	.....	44.2	+ 2.1	68	19	52	22	12	36	32	40	38	82	4.88	+ 2.0	12	8,641	sw.	48	s.	18	7	7	16	6.4	1.0	0.0
Elkins	1,947	59	67	28.00	30.09	− .03	44.8	+ 5.2	78	18	55	17	13	35	40	40	36	81	5.30	+ 2.4	18	3,993	w.	25	w.	4	3	8	19	7.7	2.4	0.0
Parkersburg	638	77	84	29.41	30.08	− .04	47.2	+ 4.0	81	18	56	26	13	39	32	42	39	77	5.56	+ 2.7	14	4,532	se.	28	nw.	19	8	4	18	6.9	0.6	0.0
Pittsburgh	842	353	410	29.14	30.06	− .04	44.6	+ 1.7	77	18	51	24	13	38	34	41	38	81	5.06	+ 2.5	16	8,546	sw.	47	nw.	4	2	4	24	8.7	2.5	0.0
Lower Lake Region.							38.8	− 0.3										82	4.12	+ 1.1										8.7		
Buffalo	767	247	280	29.20	30.05	.00	37.6	− 1.4	68	19	43	22	13	32	29	35	32	83	3.77	+ 0.4	20	12,728	w.	58	sw.	19	0	1	29	9.7	8.4	0.0
Canton	448	10	61	29.54	30.04	.....	30.8	− 3.1	73	19	37	12	23	24	32	.....	.....	.....	2.67	− 0.7	21	8,397	e.	42	w.	19	3	5	22	8.3	14.5	0.8
Oswego	335	76	91	.....	30.05	.00	37.6	− 1.5	72	19	43	21	23	32	29	.....	.....	.....	5.25	+ 1.8	22	8,965	s.	50	nw.	2	0	4	26	....	6.8	0.0
Rochester	523	86	102	29.48	30.07	+ .02	38.0	+ 0.1	73	19	43	24	13	33	33	35	32	78	4.63	+ 1.9	21	6,420	w.	38	w.	5	1	3	26	9.2	10.7	0.0
Syracuse	597	97	113	29.40	30.06	.00	37.5	− 1.2	74	19	43	22	8	32	31	.....	.....	.....	6.58	+ 3.9	20	8,145	w.	44	nw.	5	0	6	24	8.8	5.0	0.0
Erie	714	130	166	29.26	30.04	− .02	41.2	+ 0.1	70	18	46	26	13	36	31	39	36	82	5.21	+ 1.6	17	10,614	ne.	53	ne.	1	0	4	26	9.1	7.2	0.0
Cleveland	762	190	201	29.21	30.05	− .02	42.0	+ 1.6	69	18	47	26	13	37	29	39	36	81	3.93	+ 1.2	15	11,110	s.	54	ne.	1	1	2	27	9.0	0.9	0.0
Sandusky	629	62	103	29.35	30.05	− .03	42.2	+ 1.4	69	19	48	27	12	36	29	.....	.....	.....	3.18	+ 0.4	13	10,248	sw.	56	n.	1	1	8	21	8.5	1.8	0.0
Toledo	628	208	243	29.36	30.06	− .01	40.4	+ 0.7	65	19	46	24	12	34	26	37	34	83	3.34	+ 0.7	15	10,775	sw.	50	sw.	4	2	7	21	8.1	2.1	0.0
Fort Wayne	856	113	124	29.12	30.06	.....	40.1	− 0.5	63	18	47	19	12	33	23	38	35	85	3.54	.....	14	6,841	sw.	38	sw.	4	1	8	21	8.2	3.4	0.0
Detroit	730	218	245	29.25	30.06	.00	38.9	+ 0.3	62	18	44	27	10	34	24	36	33	82	2.59	0.0	13	8,788	sw.	52	n.	1	3	7	20	8.1	8.3	0.0
Upper Lake Region.							32.9	− 1.4										82	2.33	− 0.1										8.4		
Alpena	609	13	92	29.38	30.06	+ .05	33.1	− 0.6	51	18	38	17	12	28	15	31	28	81	2.22	− 0.3	17	7,718	nw.	36	nw.	4	1	9	20	8.2	6.0	0.0
Escanaba	612	54	60	29.38	30.07	+ .04	30.2	− 1.5	49	2	36	5	20	24	35	28	25	81	2.38	+ 0.1	15	6,787	nw.	38	sw.	20	2	3	25	8.6	15.4	0.9
Grand Haven	632	54	89	29.36	30.06	+ .02	36.2	− 1.8	56	17	41	18	12	31	19	34	30	80	2.96	+ 0.4	14	8,143	n.	32	nw.	19	1	5	24	8.8	14.9	0.0
Grand Rapids	707	70	87	29.28	30.07	+ .02	36.7	− 1.4	59	17	42	18	12	32	21	34	30	79	3.64	+ 1.1	10	4,073	e.	23	w.	4	1	2	27	9.1	9.7	0.0
Houghton	684	62	99	29.33	30.08	+ .06	28.7	− 2.8	45	2	33	7	20	24	21	.....	.....	.....	1.17	− 1.6	14	6,496	w.	34	w.	29	1	3	26	9.0	7.9	2.0
Lansing	878	11	62	29.08	30.05	.....	35.2	− 1.6	59	17	41	13	12	29	23	33	31	87	4.06	+ 1.6	13	4,624	ne.	30	ne.	1	0	5	25	8.9	21.8	0.0
Ludington	637	60	66	29.34	30.06	.....	35.4	.....	51	4	40	21	12	31	16	33	29	79	1.52	.....	12	7,260	se.	31	sw.	10	2	6	22	8.3	7.9	0.0
Marquette	734	77	111	29.27	30.09	+ .07	29.9	− 2.0	46	2	35	6	20	25	29	27	24	82	1.97	− 0.8	16	7,156	w.	33	se.	20	2	3	25	8.7	14.3	3.6
Port Huron	638	70	120	29.83	30.04	− .01	37.0	+ 0.2	61	18	42	18	12	32	24	35	33	87	2.86	+ 0.2	16	8,850	nw.	44	n.	1	1	8	21	8.1	7.9	2.0
Saginaw	641	69	77	29.35	30.06	.....	35.5	.....	60	17	41	20	12	30	20	34	32	87	2.36	+ 0.1	12	6,130	nw.	35	ne.	1	0	7	23	8.8	7.0	0.0
Sault Sainte Marie	614	11	52	29.36	30.08	+ .07	29.5	− 1.2	46	1	34	10	23	24	19	27	25	83	2.21	− 0.7	21	6,111	e.	33	nw.	24	5	3	22	8.1	13.9	3.5
Chicago	823	140	310	29.16	30.06	− .01	40.8	+ 1.6	65	17	46	22	12	36	17	37	34	78	3.51	+ 1.0	13	9,049	nw.	44	ne.	8	4	8	18	7.5	1.6	0.0
Green Bay	617	109	144	29.38	30.06	+ .02	31.3	− 1.2	49	4	37	10	20	26	39	29	26	82	1.14	− 0.8	11	7,763	n.	34	nw.	4	1	8	21	8.5	8.5	0.0
Milwaukee	681	125	139	29.30	30.06	+ .01	36.2	+ 0.1	56	4	42	19	22	31	20	33	29	77	1.42	− 0.6	10	7,745	n.	33	ne.	1	2	8	20	8.1	1.6	0.0
Duluth	1,133	11	47	28.83	30.10	+ .06	23.2	− 6.1	48	4	29	−11	20	17	25	21	19	88	0.70	− 0.9	7	8,293	nw.	37	nw.	4	4	6	20	7.6	8.2	2.0
North Dakota.							21.5	− 3.0										83	0.61	− 0.2										7.3		
Moorhead	940	50	58	29.08	30.14	+ .06	21.8	− 2.6	61	3	29	−16	20	14	31	20	16	81	0.52	− 0.5	10	5,812	n.	21	s.	12	4	7	19	7.3	4.5	0.6
Bismarck	1,674	8	57	28.29	30.15	+ .08	22.6	− 3.4	66	3	30	−12	19	15	37	20	18	84	0.84	+ 0.2	8	5,826	nw.	32	nw.	12	4	13	13	6.7	8.7	3.0
Devils Lake	1,482	11	44	28.46	30.10	+ .04	18.6	− 4.0	60	3	26	−17	19	12	29	17	14	85	0.43	− 0.3	6	6,874	w.	25	ne.	7	4	8	18	7.3	5.1	1.0
Ellendale	1,457	10	56	28.50	30.12	.....	20.2	.....	65	3	29	−17	19	12	40	.....	.....	.....	0.65	.....	8	8,670	nw.	42	nw.	13	4	10	16	7.6	6.4	1.1
Grand Forks	835	12	89	.....	.....	.....	18.9	.....	59	3	27	−23	21	11	31	.....	.....	.....	0.36	.....	6	.....	nw.	32	s.	27	2	6	22	....	3.6	2.6
Williston	1,878	41	48	28.02	30.07	+ .01	23.0	− 2.2	65	3	32	−20	20	14	37	20	17	82	0.65	0.0	10	5,503	w.	37	se.	22	3	9	18	7.7	6.5	0.4
Upper Mississippi Valley.							37.7	0.0										81	2.44	+ 0.5										7.3		
Minneapolis	918	102	208	29.06	30.08	.....	27.5	.....	54	1	33	− 3	20	22	29	.....	.....	.....	1.58	+ 0.4	8	7,581	nw.	33	s.	28	6	5	19	7.4	16.6	2.4
St. Paul	837	236	261	29.17	30.10	+ .04	27.0	− 3.9	53	1	33	− 5	20	21	33	.....	.....	.....	1.58	+ 0.3	8	7,260	nw.	33	w.	2	5	6	19	7.4	18.1	2.5
La Crosse	714	11	48	29.28	30.08	+ .01	30.2	− 3.4	55	4	37	7	12	23	25	.....	.....	.....	1.54	0.0	12	3,442	n.	19	nw.	4	4	4	22	8.0	10.5	0.0
Madison	974	70	78	29.00	30.09	+ .03	31.9	− 2.4	54	4	37	12	22	26	19	30	28	87	1.55	− 0.2	10	7,330	n.	30	n.	27	2	4	24	8.3	12.3	0.0
Wausau	1,247	4	....	28.68	30.06	.....	26.7	.....	50	1	33	− 3	20	20	33	.....	.....	.....	1.48	.....	11	.....	nw.	.....	.....	.....	2	1	27	8.7	17.0	1.8
Charles City	1,015	10	49	28.98	30.09	+ .01	30.1	− 2.9	56	4	37	3	12	24	23	28	26	88	0.96	− 0.4	8	4,577	nw.	24	s.	20	5	5	20	7.7	11.2	0.0
Davenport	606	71	79	29.40	30.07	− .01	36.8	− 0.7	64	4	43	13	12	31	24	34	31	82	0.77	− 1.0	8	5,090	e.	25	e.	8	4	5	21	7.6	5.4	0.0
Des Moines	861	84	97	29.14	30.07	− .01	35.8	− 1.0	64	4	43	14	22	28	28	32	28	77	0.35	− 1.1	6	4,823	n.	20	sw.	15	8	6	16	6.6	0.4	0.0
Dubuque	698	81	96	29.33	30.10	+ .03	34.2	− 1.8	59	4	40	14	12	28	24	32	29	82	0.91	− 0.9	7	4,638	nw.	24	nw.	4	5	4	21	7.7	7.0	0.0
Keokuk	614	64	78	29.38	30.08	− .01	40.3	+ 0.9	68	16	48	17	12	33	27	36	33	79	1.12	− 0.7	9	5,010	n.	22	n.	8	4	9	17	7.4	1.5	0.0
Cairo	356	87	93	29.68	30.07	− .05	51.2	+ 4.3	74	18	60	31	12	42	34	45	41	74	11.18	+ 7.2	14	6,908	s.	44	sw.	18	5	10	15	6.5	T.	0.0
Peoria	609	11	45	29.39	30.07	− .02	39.9	+ 2.4	65	4	47	15	12	33	27	35	35	88	3.43	+ 0.8	12	4,920	nw.	23	ne.	9	4	10	16	7.3	4.2	0.0
Springfield, Ill	644	10	91	29.36	30.05	− .05	43.0	+ 2.3	67	6	50	25	12	36	25	39	36	82	3.25	+ 0.6	10	5,849	s.	26	nw.	11	5	10	15	6.8	0.1	0.0
Hannibal	534	74	109	29.48	30.06	− .03	42.6	+ 2.1	70	6	51	23	12	35	25	.....	.....	.....	1.50	− 0.4	8	5,600	nw.	24	n.	8	6	8	16	6.8	0.7	0.0
St. Louis	567	265	303	29.44	30.06	− .04	47.3	+ 3.9	73	17	56	28	12	39	31	41	36	69	4.43	+ 1.6	8	8,936	s.	40	n.	8	7	11	12	6.0	T.	0.0
Missouri Valley.							37.8	+ 0.4										76	0.55	− 0.7										5.8		
Columbia, Mo.	781	11	84	29.21	30.06	− .03	43.7	+ 1.3	75	16	54	17	12	34	31	.....	.....	.....	1.34	− 1.0	6	5,522	se.	33	nw.	11	9	9	12	5.9	0.5	0.0
Kansas City	963	161	181	29.01	30.07	− .02	44.8	+ 3.3	76	16	54	23	12	35	35	38	31	65	0.07	− 1.8	4	7,623	n.	38	nw.	27	14	9	7	4.6	0.5	0.0
St. Joseph	967	11	49	29.00	30.06	.....	41.8	.....	72	16	52	21	22	32	31	35	30	72	0.03	.....	1	5,551	nw.	31	nw.	27	13	10	7	4.5	T.	0.0
Springfield, Mo.	1,324	98	104	28.54	30.06	− .04	48.4	+ 4.0	76	16	59	23	12	38	34	42	37	72	2.46	− 0.2	10	7,905	se.	31	nw.	18	14	9	7	4.2	T.	0.0
Iola	984	11	50	29.00	30.06	− .03	45.6	+ 2.6	80	16	58	22	12	34	39	.....	.....	.....	0.13	− 1.2	2	5,091	s.	25	n.	8	13	4	13	5.6	0.5	0.0
Topeka	987	92	107	.....	.....	.....	43.8	+ 2.1	75	4	55	20	22	33	33	.....	.....	.....	0.01	− 1.2	1	6,895	n.	35	n.	8	10	13	7	4.9	T.	0.0
Drexel	1,299	10	53	28.65	30.07	.....	34.8	.....	66	4	45	8	22	25	34	30	27	81	0.16	.....	5	7,061	n.	33	s.	15	7	12	11	6.2	1.4	0.0
Lincoln	1,189	11	84	28.77	30.08	.00	37.5	− 0.5	69	4	48	10	22	27	39	33	29	78	0.02	− 0.8	2	6,875	n.	38	nw.	26	10	8	12	5.8	0.1	0.0
Omaha	1,105	115	122	28.88	30.09	+ .01	36.9	− 0.8	65	4	45	11	22	29	33	32	28	75	0.09	− 1.0	3	6,198	nw.	28	n.	8	9	8	13	6.0	0.5	0.0
Valentine	2,598	47	54	27.30	30.09	+ .01	32.8	− 0.9	72	3	44	0	22	22	42	27	23	77	0.68	0.0	10	6,099	w.	34	s.	29	5	12	13	6.2	7.9	0.0
Sioux City	1,135	94	164	28.85	30.11	+ .03	31.6	− 2.7	62	4	40	4	22	24	26	29	25	79	0.58	− 0.4	8	7,126	s.	32	s.	15	8	5	17	6.9	6.3	0.8
Huron	1,306	59	74	28.69	30.14	+ .06	27.0	− 0.4	67	3	36	− 8	19	18	39	24	21	83	0.42	− 0.2	8	6,096	nw.	28	se.	29	7	10	13	6.0	5.6	T.
Pierre	1,572	70	75	28.39	30.11	+ .03	29.4	− 2.2	71	3	37	− 4	19	22	39	26	21	75	0.49	+ 0.1	8	5,710	nw.	30	nw.	12	2	10	18	7.4	3.6	T.
Yankton	1,233	49	57	28.75	30.11	+ .03	31.9	− 1.6	68	3	41	1	19	23	37	.....	.....	.....	0.32	− 0.5	8	5,343	nw.	24	s.	25	5	11	14	7.1	2.8	0.0

TABLE 1.—*Climatological data for Weather Bureau stations, November, 1921*—Continued.

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.												Precipitation.			Wind.										
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity.	Total.	Departure from normal.	Days with 0.01 inch or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet and ice on ground at end of month.
	Ft.	Ft.	Ft.	In.	In.	In.	°F.	°F.	°F		°F	°F.		°F	°F.	°F.	°F.	%	In.	In.		Miles								0–10	In.	In.
Northern Slope.							33.0	+ 0.8										67	1.26	+ 0.4										6.3		
Billings	3,140	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Havre	2,505	11	44	27.36	30.08	+ .05	25.8	− 4.8	70	3	35	−26	19	17	40	23	20	81	1.09	+ 0.3	9	4,646	sw.	28	sw.	30	3	7	20	7.8	8.4	0.0
Helena	4,110	87	112	25.77	30.07	− .03	31.2	− 1.5	62	3	41	−13	19	22	32	26	20	67	1.65	+ 0.9	12	4,902	sw.	35	sw.	26	0	6	24	8.4	23.8	3.7
Kalispell	2,973	48	56	.....	30.05	− .02	30.3	− 1.7	54	1	37	−12	19	24	24	.....	.....	.....	2.39	+ 0.5	12	3,475	nw.	22	nw.	21	3	4	23	....	18.3	3.0
Miles City	2,371	26	48	27.48	30.11	+ .04	30.8	− 0.1	70	3	40	−15	19	22	34	26	22	79	2.23	+ 1.6	11	4,030	se.	30	nw.	1	10	11	9	5.1	14.2	2.5
Rapid City	3,259	50	58	26.60	30.11	+ .03	33.3	− 0.3	72	3	45	− 3	19	22	36	27	19	60	0.63	+ 0.2	8	5,927	w.	36	n.	28	3	11	16	7.0	6.6	0.0
Cheyenne	6,088	84	101	23.97	30.01	− .06	38.6	+ 3.7	67	4	50	13	18	27	36	31	21	51	0.34	− 0.1	4	9,095	w.	53	w.	21	11	11	8	5.2	3.6	T.
Lander	5,372	60	68	24.61	30.05	− .05	36.8	+ 8.1	70	3	51	− 1	18	23	42	29	21	58	0.43	− 0.2	3	4,002	sw.	60	sw.	25	9	17	4	4.9	4.7	0.0
Sheridan	3,790	10	47	26.09	30.10	.....	29.6	.....	77	3	42	− 7	19	17	51	25	19	70	1.38	.....	7	3,125	nw.	37	nw.	26	4	14	12	6.5	13.2	3.7
Yellowstone Park	6,200	11	48	23.83	30.06	+ .05	31.9	+ 2.6	60	4	42	− 5	19	22	40	26	20	66	2.55	+ 1.1	14	6,089	s.	41	s.	22	5	8	17	6.9	23.7	8.8
North Platte	2,821	11	51	27.12	30.12	+ .04	38.0	+ 2.9	76	3	52	6	22	24	45	30	24	72	0.04	− 0.4	2	4,757	w.	32	nw.	26	10	8	12	5.3	0.1	0.0
Middle Slope.							44.7	+ 3.0										59	0.28	− 0.7										4.0		
Denver	5,292	106	113	24.72	30.03	− .03	43.7	+ 4.5	72	3	56	13	19	31	33	34	22	48	0.57	0.0	3	5,119	s.	32	nw.	26	17	8	5	4.0	6.5	0.0
Pueblo	4,685	80	86	25.29	30.04	− .01	42.8	+ 3.5	77	7	59	5	19	27	50	33	22	53	0.72	+ 0.4	2	3,857	nw.	30	nw.	26	15	13	2	3.8	7.2	0.0
Concordia	1,392	50	58	28.58	30.09	+ .01	41.1	+ 1.2	78	5	53	13	23	29	40	34	27	67	0.08	− 0.9	2	5,169	n.	36	nw.	26	8	12	10	5.7	T.	0.0
Dodge City	2,509	11	51	27.44	30.10	+ .03	43.6	+ 3.1	80	4	59	9	23	28	49	33	24	59	T.	− 0.6	0	6,150	nw.	29	nw.	26	21	4	5	2.5	T.	0.0
Wichita	1,358	139	158	28.59	30.04	− .04	45.6	+ 1.8	80	4	56	20	22	35	33	38	31	64	T.	− 1.2	0	8,560	s.	38	s.	12	15	5	10	4.5	T.	0.0
Altus	1,410	5	.....	.....	.....	.....	53.0	.....	86	4	69	19	19	37	46	.....	.....	.....	T.	.....	0	.....	se.	.....	.....	.....	25	1	4	....	0.0	0.0
Broken Arrow	765	11	52	29.22	30.07	.....	50.3	.....	80	16	63	25	10	37	38	.....	.....	.....	1.28	.....	3	9,106	n.	39	w.	8	15	7	8	4.3	0.0	0.0
Muskogee	652	4	.....	.....	.....	.....	53.8	.....	84	4	68	24	10	40	43	.....	.....	.....	1.26	.....	3	.....	w.	.....	.....	.....	10	16	4	....	0.0	0.0
Oklahoma City	1,214	10	47	28.77	30.07	− .01	51.5	+ 3.6	84	5	65	24	19	38	41	41	33	61	0.33	− 1.9	1	9,411	s.	42	s.	16	16	10	4	3.2	0.0	0.0
Southern Slope.							55.8	+ 4.8										47	0.09	− 1.1										3.2		
Abilene	1,738	10	52	28.24	30.06	− .01	57.4	+ 4.8	85	15	72	25	19	42	46	45	34	50	0.01	− 1.2	1	6,393	s.	27	sw.	23	15	6	9	3.9	0.0	0.0
Amarillo	3,676	10	49	26.20	30.04	− .01	51.0	+ 7.2	80	3	67	17	19	35	44	39	30	56	T.	− 1.1	0	7,318	sw.	32	s.	12	22	8	0	2.8	T.	0.0
Del Rio	944	64	71	29.07	30.06	+ .01	63.0	+ 3.7	90	14	75	40	20	51	36	.....	.....	.....	0.36	− 0.8	3	4,775	se.	31	n.	18	15	8	7	4.0	0.0	0.0
Roswell	3,566	75	85	26.40	30.03	.00	51.6	+ 3.5	80	21	70	13	19	33	53	37	18	34	T.	− 1.2	0	4,586	s.	33	nw.	18	20	9	1	2.3	0.0	0.0
Southern Plateau.							51.9	+ 3.0										45	0.05	− 0.5										2.1		
El Paso	3,762	110	133	26.25	30.04	+ .04	54.4	+ 3.5	75	5	69	24	19	40	41	40	22	32	0.22	− 0.4	3	5,993	w.	38	nw.	18	21	8	1	1.8	0.0	0.0
Santa Fe	7,013	57	66	23.28	30.07	+ .04	43.0	+ 4.8	65	6	55	14	19	31	30	30	18	43	T.	− 0.8	0	5,544	n.	33	sw.	17	22	6	2	2.1	T.	0.0
Flagstaff	6,908	10	59	23.41	30.07	+ .05	40.2	+ 5.6	66	8	57	7	18	23	49	29	.....	.....	0.33	.....	4	.....	w.	34	se.	16	20	7	3	....	0.0	0.0
Phoenix	1,108	76	81	28.84	30.00	+ .02	60.9	+ 2.2	89	2	78	30	19	43	44	46	36	49	0.04	− 0.9	1	2,954	e.	19	w.	17	21	7	2	2.3	0.0	0.0
Yuma	141	9	54	29.86	30.01	+ .03	63.2	+ 1.3	89	4	78	36	19	48	38	50	40	51	0.00	− 0.3	0	2,921	n.	22	w.	28	23	6	1	1.9	0.0	0.0
Independence	3,957	9	41	26.06	30.12	+ .07	49.8	+ 0.6	75	13	65	20	18	35	38	37	21	38	T.	− 0.3	0	2,952	nw.	25	sw.	15	21	7	2	2.3	0.0	0.0
Middle Plateau.							43.2	+ 3.7										51	0.42	− 0.4										4.1		
Reno	4,532	74	81	25.54	30.12	+ .01	45.0	+ 4.0	74	2	60	9	18	30	45	35	23	48	0.20	− 0.9	4	4,082	w.	37	w.	15	15	12	3	3.7	2.3	0.0
Tonopah	6,090	12	20	24.16	30.10	.....	46.1	.....	68	1	54	14	18	38	23	35	21	38	0.06	− 0.8	1	4,727	w.	30	nw.	17	16	11	3	2.9	0.0	0.0
Winnemucca	4,344	18	56	25.69	30.14	.00	41.0	+ 3.5	74	3	58	2	18	24	55	32	22	55	0.04	− 0.1	4	5,981	sw.	33	sw.	20	13	6	11	5.2	T.	0.0
Modena	5,479	10	43	24.67	30.09	+ .01	41.8	+ 2.8	70	4	58	8	18	25	43	30	19	50	0.18	− 0.4	3	6,797	w.	41	s.	15	21	6	3	2.6	T.	0.0
Salt Lake City	4,360	163	203	25.69	30.09	− .03	45.9	+ 5.5	67	3	55	22	18	37	27	33	29	55	1.04	− 0.4	6	4,258	se.	30	sw.	21	11	6	13	5.5	4.9	0.0
Grand Junction	4,602	60	68	25.45	30.08	.00	42.4	+ 2.5	66	15	55	20	19	30	37	34	25	58	0.42	− 0.1	4	3,102	se.	24	sw.	16	14	9	7	4.5	0.5	0.0
Northern Plateau.							41.5	+ 2.8										70	2.54	+ 1.2										7.2		
Baker	3,471	48	53	26.46	30.08	− .08	39.7	+ 4.8	65	3	49	16	17	30	35	35	30	71	2.47	+ 1.3	12	4,943	se.	28	s.	22	6	6	18	7.0	8.6	0.0
Boise	2,739	78	86	27.22	30.11	− .03	44.7	+ 5.1	67	4	54	24	18	35	31	39	31	62	3.27	+ 2.4	10	3,361	se.	32	nw.	25	9	7	14	6.3	0.6	0.0
Lewiston	757	40	48	29.25	30.07	− .05	41.4	+ 0.5	65	1	50	22	21	33	33	.....	.....	.....	2.45	+ 1.1	16	1,798	e.	26	w.	30	4	6	20	7.6	15.9	0.0
Pocatello	4,477	60	68	25.51	30.08	− .06	42.4	+ 6.1	68	3	52	22	18	33	37	35	28	62	0.71	+ 0.2	8	7,417	sw.	36	sw.	19	9	10	11	6.0	0.1	0.0
Spokane	1,929	101	110	27.97	30.06	− .04	36.8	− 0.5	60	6	44	− 1	19	30	26	35	32	83	2.40	+ 0.1	14	4,182	sw.	32	sw.	25	0	5	25	8.7	10.5	0.0
Walla Walla	991	57	65	28.98	30.07	− .06	43.9	+ 1.0	67	6	51	15	20	36	32	39	34	71	3.91	+ 1.8	14	4,002	s.	30	sw.	14	4	7	19	7.5	19.9	0.0
North Pacific Coast Region.							46.7	+ 2.4										89	8.40	+ 1.5										8.6		
North Head	211	11	56	29.75	29.98	− .07	49.2	+ 1.5	67	3	53	37	17	45	22	48	47	93	10.52	+ 4.2	23	13,179	s.	84	s.	21	3	5	22	8.2	0.0	0.0
Port Angeles	29	8	53	29.95	29.98	.....	42.0	+ 4.8	57	4	46	27	21	38	16	.....	.....	.....	6.35	+ 1.9	22	3,439	s.	24	w.	11	0	1	29	9.5	9.2	0.0
Seattle	125	215	250	29.88	30.01	− .03	45.4	+ 0.8	61	5	50	28	20	41	20	44	43	91	6.60	+ 0.7	22	7,384	se.	47	s.	22	0	5	25	9.1	7.3	0.0
Tacoma	213	113	120	29.78	30.02	− .02	45.6	+ 1.5	62	4	50	29	21	41	21	.....	.....	.....	6.82	− 1.7	21	4,699	sw.	29	sw.	26	0	4	26	8.5	11.0	0.0
Tatoosh Island	86	7	57	29.83	29.98	− .04	46.5	+ 0.9	62	4	50	30	20	43	20	45	43	90	12.02	− 0.1	23	13,855	e.	72	s.	22	0	4	26	8.6	T.	0.0
Yakima	1,071	4	.....	.....	.....	.....	36.9	.....	68	6	48	6	23	36	35	.....	.....	.....	2.33	.....	7	.....	nw.	.....	.....	.....	9	8	13	....	25.4	6.0
Medford	1,425	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Oreg.	153	68	106	29.88	30.04	− .06	48.8	+ 3.2	68	5	54	29	20	43	23	46	44	86	10.04	+ 3.6	19	4,408	se.	28	s.	21	1	3	26	8.9	0.0	0.0
Roseburg	510	9	57	29.55	30.11	− .01	49.8	+ 4.2	66	6	56	33	18	44	20	47	44	84	6.46	+ 2.1	17	2,298	s.	24	sw.	22	0	16	14	7.2	0.0	0.0
Middle Pacific Coast Region.							54.6	+ 1.1										73	2.38	− 0.7										5.0		
Eureka	62	73	89	30.08	30.15	+ .03	52.0	+ 1.0	77	3	58	33	18	47	32	49	47	86	6.21	+ 0.5	12	4,067	se.	30	nw.	27	2	8	20	7.7	0.0	0.0
Mount Tamalpais	2,375	11	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Point Reyes Light	490	7	18	29.55	30.06	.....	53.9	+ 0.9	78	4	59	43	18	49	27	.....	.....	.....	1.70	.....	8	12,633	nw.	70	nw.	27	9	6	15	5.8	0.0	0.0
Red Bluff	332	50	56	29.74	30.11	.00	54.0	+ 0.6	84	9	66	27	19	42	41	47	39	62	1.52	− 1.7	7	2,887	nw.	24	nw.	28	15	6	9	4.2	0.0	0.0
Sacramento	69	106	117	30.04	30.11	+ .02	54.8	+ 1.4	80	6	65	31	20	44	33	49	43	68	1.09	− 1.1	4	3,697	se.	18	se.	30	19	3	8	3.3	0.0	0.0
San Francisco	155	208	243	29.94	30.11	+ .02	57.8	+ 2.3	79	4	64	45	19	52	23	52	48	77	1.43	− 1.0	5	4,361	w.	26	nw.	27	14	7	9	4.9	0.0	0.0
San Jose	141	12	110	29.96	30.12	.....	54.9	+ 0.5	85	4	68	30	20	42	41	.....	.....	.....	1.65	− 0.2	7	3,100	s.	22	sw.	3	16	5	9	4.0	0.0	0.0
South Pacific Coast Region.							59.8	+ 2.3										62	0.19	− 1.0										3.5		
Fresno	327	89	98	29.75	30.11	+ .05	57.0	+ 2.4	85	3	69	32	18	45	35	47	36	52	0.26	− 0.8	1	3,090	nw.	36	nw.	27	18	7	5	3.1	0.0	0.0
Los Angeles	338	159	191	29.69	30.06	+ .04	63.2	+ 2.9	94	3	73	45	18	53	34	53	46	63	0.05	− 1.4	1	3,470	ne.	21	n.	17	15	11	4	3.4	0.0	0.0
San Diego	87	62	70	29.95	30.04	+ .02	60.4	+ 1.4	93	3	68	45	22	52	38	54	49	73	0.30	− 0.5	3	3,538	nw.	25	w.	28	16	8	6	3.7	0.0	0.0
San Luis Obispo	201	32	40	29.88	30.10	+ .04	58.8	+ 2.5	92	4	72	34	21	45	48	48	40	61	0.16	− 1.5	2	2,505	n.	20	ne.	22	15	11	4	3.8	0.0	0.0
West Indies.																																
San Juan, P. R.	82	8	54	29.91	29.99	.....	77.8	.....	88	20	83	70	19	73	16	.....	.....	.....	4.27	− 2.6	17	8,164	e.	33	e.	8	13	13	4	4.4	0.0	0.0
Panama Canal.																																
Balboa Heights	118	7	97	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colon	25	5	71	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alaska.																																
Juneau	80	11	49	.....	.....	.....	33.2	.....	47	1	37	14	20	29	14	30	22	66	5.96	.....	13	4,542	ne.	30	ne.	22	13	4	13	5.2	2.8	0.0

TABLE II.—*Data furnished by the Canadian Meteorological Service, November, 1921.*

Stations.	Altitude above mean sea level, Jan. 1, 1919.	Pressure.			Temperature of the Air.						Precipitation.		
		Station reduced to mean of 24 hours.	Sea level reduced to mean of 24 hours.	Departure from normal.	Mean max.+mean min.÷2.	Departure from normal.	Mean maximum.	Mean minimum.	Highest.	Lowest.	Total.	Departure from normal.	Total snowfall.
	Feet.	*In.*	*In.*	*In.*	°*F*	°*F*	°*F*	°*F*	°*F*	°*F*	*In.*	*In.*	*In.*
St. Johns, N. F	125												
Sydney, C. B. I	48	29.94	29.99	+0.04	34.9	−2.2	40.0	29.9	60	20	3.64	−1.80	13.0
Halifax, N. S	88	29.90	30.01	.00	35.8	−1.5	42.4	29.1	63	15	7.64	+1.98	17.4
Yarmouth, N. S	65	29.93	30.00	− .02	37.9	−2.0	43.2	32.7	57	21	4.91	+0.35	5.3
Charlottetown, P. E. I	38	29.97	30.01	+ .05	32.6	−2.9	37.4	27.9	56	14	4.20	+0.23	8.3
Chatham, N. B	28	30.01	30.03	+ .06	28.4	−2.6	34.5	22.4	56	10	4.02	+0.27	35.2
Father Point, Que	20	30.03	30.05	+ .09	25.6	−3.3	31.6	19.6	56	2	2.41	−0.70	18.1
Quebec, Que	296	29.75	30.09	+ .07	27.7	−1.3	32.7	22.7	60	6	3.31	−0.45	23.2
Montreal, Que	187	29.85	30.07	+ .04	29.7	−2.1	34.6	24.8	64	12	3.07	−0.67	20.6
Stonecliffe, Ont	489												
Ottawa, Ont	236	29.81	30.09	+ .07	29.2	−2.5	36.2	22.3	66	10	3.37	+0.83	25.9
Kingston, Ont	285	29.74	30.06	+ .02	34.1	−0.9	40.3	28.0	62	14	2.24	−1.00	9.8
Toronto, Ont	379	29.64	30.06	+ .02	36.3	+0.7	42.0	30.7	62	21	1.44	−1.70	7.5
Cochrane, Ont	930												
White River, Ont	1,244	28.68	30.04	+ .06	16.5	−4.0	25.9	7.2	42	−19	2.21	+0.36	21.9
Port Stanley, Ont	592	29.40	30.06	+ .01	36.6	−0.2	42.8	30.4	56	20	3.58	+0.21	4.7
Southampton, Ont	656	29.31			35.4	+0.4	40.5	30.3	59	20	2.78	−0.92	4.1
Parry Sound, Ont	688	29.32	30.03	+ .02	30.2	−1.9	37.2	23.2	58	8	4.12	−0.25	8.8
Port Arthur, Ont	644	29.37	30.11	+ .11	22.3	−1.7	28.8	15.8	48	−10	1.20	−0.13	10.9
Winnipeg, Man	760	29.24	30.11	+ .07	18.2	+0.2	24.5	12.0	46	−14	0.86	−0.22	8.5
Minnedosa, Man	1,690	28.20	30.11	+ .07	14.8	−2.5	22.1	7.7	52	−23	1.00	0.00	10.0
La Pas, Man	860												
Qu'Appelle, Sask	2,115	27.69	30.04	+ .04	16.5	−2.3	24.1	8.9	56	−26	1.64	+0.75	16.4
Medicine Hat, Alb	2,144												
Moose Jaw, Sask	1,759												
Swift Current, Sask	2,392	27.40	30.13	+ .11	21.5	−1.7	29.3	13.7	66	−20	0.43	−0.26	4.2
Calgary, Alb	3,428												
Banff, Alb	4,521												
Edmonton, Alb	2,150												
Prince Albert, Sask	1,450	28.43	30.07	+ .04	14.1	−1.3	21.0	7.2	52	−22	1.90	+1.07	19.0
Battleford, Sask	1,592	28.22	30.03	+ .01	16.9	+0.6	24.2	9.6	55	−15	0.84	+0.26	8.4
Kamloops, B. C	1,262												
Victoria, B. C	230	29.72	29.98	− .01	43.7	+0.5	47.3	40.2	58	24	6.00	−0.88	3.0
Barkerville, B. C	4,180												
Triangle Island, B. C	680												
Prince Rupert, B. C	170												
Hamilton, Ber	151	30.01	30.17	+ .12	70.9	+2.2	76.3	65.5	80	61	6.27	+1.89	

SEISMOLOGICAL REPORTS FOR NOVEMBER, 1921.

W. J. HUMPHREYS, Professor in Charge.

[Weather Bureau, Jan. 3, 1922.]

TABLE 1.—*Noninstrumental earthquake reports, November, 1921.*

Day.	Approximate time, Greenwich civil.		Station.	Approximate latitude.		Approximate longitude.		Intensity Rossi-Forel.	Number of shocks.	Duration.	Sounds.	Remarks.	Observer.
			CALIFORNIA.										
1921.	*H.*	*m.*		°	′	°	′			*Sec.*			
2	23	22	Venice	33	58	118	28	4	4	1½	Rumbling	Believed due to guns at San Pedro.	F. D. Young.
3	0	59½	do	33	58	118	28	4	6	2	do	do	Do.
15	14	25	Bakersfield	35	22	119	00	3	1		None		Western Union.
17	19	58½	Calexico	32	41	115	30	5	2	5	Loud	Cracked two buildings	W. S. Pratt.
17	22	11	Trona	35	45	117	15	2	1		None	Felt by several	H. de Ropp: R. W. Flory.
17	23	23½	Calexico	32	41	115	30	4	2	2 *ca.*	Rumbling	Felt by many	W. S. Pratt.
18	16	51	Calipatria	33	08	115	30	2–3	3	Few.	do	Felt by several	J. S. Davis.
26	6	21	Calexico	32	41	115	30	3	2	½	do	do	W. S. Pratt.
29	7	01	do	32	41	115	30	2	1	2	do	Felt by many	Do.
29	9	20	Eureka	40	45	124	15	3	1	2	None	do	L. B. Cooper.
			UTAH.										
1	15	35	Greenwich	38	30	111	50	5	2	1	do	Felt by several	W. L. Price.