unfavorable and stock-water shortage continued in many sections. Stock suffered considerably from the cold and snow in some Rocky Mountain sections and Western South Dakota. The unusually mild weather the latter half of the month allowed stock to feed on ranges and harvested fields in the northern Plains States, but much feeding was necessary in northwestern Montana. Ranges improved in central and western Texas, but there was no material change in New Mexico, where shipment to outside ranges continued.

Some damage resulted to apples by freezing in eastern Washington, and some apples were frozen on the trees in Utah during the first week of the month. Strawberries showed some improvement in Florida, but were in generally unsatisfactory condition. It was too warm during most of the month for the best development of citrus in that State, but the cooler weather the latter part was beneficial. Citrus fruits were reported as sizing and coloring nicely in California, and some lemon picking was done the latter part of the month.

CLIMATOLOGICAL TABLES.[1]

CONDENSED CLIMATOLOGICAL SUMMARY.

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

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

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

Condensed climatological summary of temperature and precipitation, by sections, November, 1922.

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	57.3	+3.0	Selma	92	1	Valley Head	18	28	1.88	−1.27	Centerville	4.73	Alaga	0.20
Alaska														
Arizona	47.5	−3.9	Parker	90	8	Fort Valley	− 2	4	1.32	+0.32	Ashdale Ranger Sta.	4.00	2 stations	0.20
Arkansas	52.9	+1.4	El Dorado	88	4	Dutton	20	[2] 21	3.89	+0.32	Lincoln	8.82	Texarkana	0.86
California	49.4	−3.4	Indio	91	20	Yreka	8	29	3.33	+0.73	Placerville	9.55	Bagdad	0.00
Colorado	32.6	−2.3	Lamar	78	10	Dillon	−23	13	1.68	+0.81	Savage Basin	4.95	Yuma	T.
Florida	67.8	+2.6	Orlando	92	6	2 stations	26	29	1.60	−1.29	Fort Lauderdale	3.52	2 stations	0.00
Georgia	57.0	+2.3	4 stations	87	[2] 3	Clayton	15	29	0.92	−1.73	Canton	2.32	Millen	0.00
Hawaii	71.5	−0.1	Kaueleau No. 2	91	24	Volcano Observatory	48	22	7.95	−0.11	Eke, Maui	32.00	Olowalu, Maui	0.03
Idaho	32.8	−2.7	Mountain Home	68	1	Obsidian	− 8	30	0.82	−1.35	Prichard	2.40	Glenns Ferry	0.15
Illinois	45.0	+3.1	Mount Carmel	82	1	Clinton	11	25	2.78	+0.38	Quincy	5.88	Palestine	1.60
Indiana	45.0	+2.9	Vevay	86	2	Shoals	12	25	2.25	−0.81	Noblesville	3.57	2 stations	1.19
Iowa	42.2	+7.2	Clarinda	74	4	Decorah	11	25	3.54	+2.03	Iowa City	5.28	Perry	1.96
Kansas	45.6	+1.5	2 stations	80	4	St. Francis	7	14	2.77	+1.57	Herington	7.08	2 stations	T.
Kentucky	48.3	+2.2	Hopkinsville	87	1	Junction City	10	26	1.93	−1.42	Bowling Green	4.55	Shelbyville	0.73
Louisiana	62.9	+4.0	Ten Mile	91	5	3 stations	29	[2] 22	4.28	+0.97	Lakeside	17.96	Burrwood	0.58
Maryland-Delaware	46.3	+1.4	11 stations	75	12	Oakland, Md	14	10	0.66	−1.88	Oakland, Md	1.27	Westernport, Md	0.40
Michigan	39.4	+3.6	Charlotte	70	1	Humboldt	8	25	2.34	−0.10	Calumet	5.78	Durand	0.54
Minnesota	35.9	+6.3	Pine River Dam	76	3	Itasca State Park	2	28	3.32	+2.41	Alexandria	5.41	Gonvick	1.61
Mississippi	58.3	+3.5	2 stations	90	[2] 2	2 stations	25	29	3.78	+0.35	Natchez	7.55	Fulton	1.58
Missouri	47.8	+2.9	Bolivar	87	3	Goodland	15	26	3.82	+1.45	Dean	6.75	Fulton	1.11
Montana	30.8	+1.5	Crow Agency	72	5	Chinook	−18	30	0.84	−0.09	Big Timber	3.26	Chinook	0.03
Nebraska	39.5	+3.0	Weeping Water	78	3	North Loup	3	14	2.55	+1.79	Tekamah	5.02	Alma	0.54
Nevada	36.8	−3.7	Logandale	80	14	Butte Mountain	− 8	23	0.67	+0.15	Lamoille	2.30	Mina	0.00
New England	38.0	+0.9	Turners Falls, Mass.	74	1	2 stations	3	27	1.45	−1.98	Somerset, Vt.	2.87	Block Island, R. I.	0.54
New Jersey	44.3	+1.3	Bridgeton	73	12	Boonton	13	26	0.91	−2.29	Highwood	1.56	Phillipsburg	0.49
New Mexico	40.2	−2.3	3 stations	82	[2] 8	Hermosa	− 2	17	1.08	+0.42	Diener	5.81	2 stations	0.11
New York	39.6	+2.1	3 stations	70	[2] 2	Indian Lake	− 1	27	1.42	−1.37	Gabriels	3.57	Avon	0.24
North Carolina	50.0	+0.8	Sloan	88	6	Banners Elk	4	29	0.63	−1.84	Bryson City	1.82	Rougemont	T.
North Dakota	31.8	+5.2	Granville	65	16	Howard	− 8	30	2.33	+1.75	Pembina	5.33	Lamoine	0.40
Ohio	43.9	+2.8	2 stations	79	[2] 2	Milfordton	10	29	1.56	−1.13	Williamsfield	2.75	Clarington	0.76
Oklahoma	51.4	+0.9	Tahlequah	89	2	Hooker	12	14	3.58	+1.14	Watts	9.69	Beaver	0.31
Oregon	37.9	−3.3	Marshfield	69	21	Lapine	− 4	3	2.09	−2.55	Willow Creek	6.51	Blitzen	0.13
Pennsylvania	42.9	+2.2	2 stations	73	2	Bradys Bend	12	29	1.21	−1.46	Saegerstown	4.52	Neshaminy Falls	0.23
Porto Rico	75.7	−1.0	San German	97	[2] 20	Aibonito	52	[2] 25	3.64	−3.81	Penuelas	7.39	Portala	0.79
South Carolina	54.8	+0.9	2 stations	88	[2] 11	Walhalla	17	29	0.61	−1.67	Cheraw	1.29	Paris Island	0.00
South Dakota	35.1	+2.8	Norris	69	16	Gannvalley	− 2	19	3.00	+2.46	Deadwood	5.50	Orman	1.00
Tennessee	50.0	+1.6	2 stations	82	2	Rugby	11	29	2.39	−0.96	Perryville	5.56	Copperhill	0.57
Texas	58.4	+1.4	Mission	95	4	Romero	11	[2] 13	2.57	+0.18	Liberty	7.14	Riomedina	0.07
Utah	35.7	−2.5	Lehi	75	1	Loa	− 5	8	1.52	+0.47	Silver Lake	5.45	3 stations	T.
Virginia	47.5	+1.3	Onley	87	17	Burkes Garden	5	29	0.57	−1.80	West Point	1.62	Mayhurst	0.07
Washington	37.3	−3.7	Wind River	67	18	2 stations	3	20	1.51	−3.36	Quinisault	6.34	Moxee	0.22
West Virginia	43.8	+1.1	4 stations	80	[2] 1	Cheat Bridge	2	29	1.15	−1.40	Pickens	2.49	Moorefield	0.17
Wisconsin	39.1	+5.6	Hillsboro	70	10	Solon Springs	4	25	3.11	+1.32	Weyerhauser	4.96	Brule Island	1.76
Wyoming	28.4	−3.2	Green River	69	8	South Pass City	−15	3	1.24	+0.53	Knowles	3.64	Elk Mountain	T.

[1] For description of tables and charts, see REVIEW, July, 1922, pp. 384-385.

[2] Other dates also.

TABLE 1.—*Climatological data for Weather Bureau stations, November, 1922.*

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 dewpoint.	Mean relative humidity.	Total.	Departure from normal.	Days with .01, or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet, and ice on ground at end of month.
	Ft.	Ft.	Ft.	In.	In.	In.	°F.	°F.	°F		°F	°F.		°F	°F.	°F.	°F.	%	In.	In.		Miles.								0-10	In.	In.
New England.							40.6	+1.4										72	1.16	-2.4										6.4		
Eastport	76	67	85	29.82	29.91	-.10	35.6	-1.1	50	1	41	19	26	30	20	33	29	78	1.93	-2.2	13	8,182	nw.	31	nw.	9	7	5	18	7.0	6.4	0.4
Greenville, Me	1,070	6		28.75	29.94		31.2		56	1	37	12	27	25	26				1.97		10						8	1	21		10.4	
Portland, Me	103	82	117	29.85	29.98	-.06	39.4	+1.4	59	12	46	20	23	33	21	34	29	69	1.33	-2.5	8	5,903	nw.	32	nw.	9	10	5	15	6.0	1.1	0.0
Concord	288	70	79	29.66	29.98	-.08	38.4	+1.6	64	1	46	11	27	30	36				1.12	-2.3	6	3,978	nw.	23	w.	24	10	5	15	6.2	T.	0.0
Burlington	404	11	48	29.55	30.00	-.05	37.1	+3.4	58	2	43	18	27	31	29				2.14	-0.4	18	7,855	s.	38	s.	14	2	4	24	8.7	2.0	T.
Northfield	876	12	60	29.03	30.00	-.05	35.3	+3.3	59	2	43	8	27	28	39	32	30	84	0.78	-1.9	13	5,031	n.	24	s.	17	3	3	24	8.1	1.5	0.0
Boston	125	115	188	29.84	29.98	-.06	43.8	+1.8	66	12	50	24	27	37	22	38	32	65	0.84	-3.3	8	7,511	w.	35	w.	24	7	11	12	6.3	0.9	0.0
Nantucket	12	14	90	29.96	29.97	-.08	44.5	-0.7	62	15	50	28	26	39	19	41	37	78	0.67	-2.6	8	11,925	nw.	60	ne.	27	11	7	12	5.6	T.	0.0
Block Island	26	11	46	29.96	29.99	-.06	44.0	-0.6	59	15	49	25	23	39	24	41	36	75	0.54	-3.3	5	15,215	nw.	55	nw.	24	10	6	14	5.8	T.	0.0
Providence	160	215	251	29.81	29.99	-.08	42.2	+1.8	63	12	49	21	27	35	22	37	31	66	1.09	-2.8	8	9,357	nw.	55	nw..	24	9	9	12	5.5	0.5	0.0
Hartford	159	122	140	29.84	30.02	-.06	42.5	+3.0	64	2	50	21	27	35	33	37	32	70	0.89	-2.9	8	5,645	nw.	42	nw.	24	7	8	15	6.6	0.5	0.0
New Haven	106	74	153	29.91	30.03	-.04	43.6	+1.6	65	12	51	24	27	36	28	38	32	67	1.48	-2.1	7	6,615	sw.	30	nw.	25	14	7	9	4.8	0.2	0.0
Middle Atlantic States.							46.3	+1.9										71	0.67	-2.2										5.5		
Albany	97	102	115	29.92	30.03	-.05	40.9	+1.6	59	12	48	21	26	34	31	37	32	73	0.90	-1.9	10	4,791	s.	26	nw.	16	6	12	12	6.2	T.	0.0
Binghamton	871	10	84	29.10	30.05	-.04	40.8	+3.2	60	11	48	22	26	34	30				1.04	-1.2	12	4,167	nw.	24	nw.	23	2	9	19	8.0	1.5	T.
New York	314	414	454	29.70	30.05	-.04	45.4	+1.2	65	12	52	27	26	39	20	40	34	67	1.16	-2.3	6	13,209	nw.	64	nw.	8	7	11	12	6.2	1.0	0.0
Harrisburg	374	94	104	29.69	30.10	-.01	45.2	+3.5	66	12	52	30	26	38	26	39	34	67	0.56	-1.8	6	4,508	w.	30	nw.	23	8	9	13	6.1	0.5	0.0
Philadelphia	117	123	190	29.96	30.09	-.01	48.1	+3.2	69	12	55	30	26	41	22	42	34	63	0.43	-2.6	4	6,964	nw.	32	nw.	24	7	11	12	6.0	T.	0.0
Reading	325	81	98	29.72	30.08		45.8		65	12	53	27	26	39	28	40	35	71	0.55	-2.6	5	3,582	nw.	24	n.	25	7	13	10	5.6	T.	0.0
Scranton	805	111	119	29.19	30.08	-.01	42.4	+3.3	62	7	49	25	26	36	24	38	33	75	0.76	-1.5	9	4,990	sw.	33	sw.	24	4	6	20	7.5	0.2	0.0
Atlantic City	52	37	172	30.02	30.08	-.02	47.1	+1.5	70	12	54	26	26	40	21	42	38	74	0.58	-2.6	6	11,336	nw.	45	nw.	24	13	11	6	4.4	T.	0.0
Cape May	18	13	49	30.09	30.11	+.01	48.2	+0.8	70	12	55	30	26	42	23	43	39	76	0.71	-2.5	4	6,848	nw.	31	nw.	24	12	4	14	5.4	0.0	0.0
Sandy Hook	22	10	55	30.02	30.05		45.6		63	12	51	30	26	41	19	41	36	72	1.10		7	11,898	sw.	51	nw.	24	7	14	9	5.5	0.3	0.0
Trenton	190	159	183	29.86	30.06		45.0		66	12	53	27	28	37	29	39	33	69	0.62	-2.8	5	7,740	nw.	46	nw.	24	8	11	11	5.7	T.	0.0
Baltimore	123	100	113	29.97	30.10	-.01	49.0	+2.7	72	12	57	29	29	41	27	42	36	68	0.44	-2.5	4	3,687	w.	20	w.	24	13	6	11	5.2	T.	0.0
Washington	112	62	85	29.98	30.11	-.01	47.9	+2.7	74	12	57	28	30	39	32	41	35	68	0.55	-2.2	4	4,331	nw.	33	nw.	20	13	5	12	5.2	T.	0.0
Lynchburg	681	153	188	29.39	30.14	+.01	48.4	+1.2	73	19	60	24	22	37	38	41	35	67	0.19	-2.6	3	5,376	w.	34	n.	20	16	8	6	4.0	T.	0.0
Norfolk	91	170	205	30.03	30.13	+.02	51.8	+0.6	74	15	59	27	26	44	26	45	40	70	0.44	-2.3	3	9,139	n.	48	nw.	15	17	7	6	3.4	T.	0.0
Richmond	144	11	52	29.98	30.14	+.02	49.0	+0.2	73	19	60	25	29	38	32	42	36	70	0.86	-1.5	3	5,286	sw.	30	sw.	15	11	11	8	4.8	0.0	0.0
Wytheville	2,304	49	55	27.75	30.18	+.05	43.6	+0.6	67	12	53	20	29	34	36	37	32	72	0.86	-2.2	6	5,083	w.	29	sw.	23	14	7	9	4.6	0.5	0.0
South Atlantic States.							55.8	+1.6										73	0.44	-2.3										3.9		
Asheville	2,255	70	84	27.80	30.20	+.06	46.5	+1.4	72	6	57	17	29	36	37	39	34	70	0.26	-2.0	3	6,457	nw.	34	nw.	24	18	6	6	3.5	0.9	0.0
Charlotte	779	55	62	29.32	30.17	+.04	51.6	+1.0	74	6	62	24	29	42	29	44	38	66	0.92	-1.9	5	3,261	sw.	19	nw.	28	16	8	6	3.4	0.5	0.0
Hatteras	11	12	11	30.10	30.11	.00	55.8	-0.5	74	14	61	36	26	51	19	51	47	77	0.79	-3.9	7	10,118	n.	44	nw.	15	19	5	6	3.5	0.0	0.0
Manteo	12	5	42				52.8		79	15	65	28	28	40	32				0.04		1		ne.				24	2	4		0.0	0.0
Raleigh	376	103	110	29.74	30.15	+.02	51.6	+1.4	75	15	61	25	26	42	30	44	39	70	0.36	-2.0	3	5,493	n.	33	nw.	15	17	6	7	3.6	0.0	0.0
Wilmington	78	81	91	30.08	30.16	+.04	54.8	+0.7	80	7	65	29	29	45	28	48	44	76	0.46	-2.0	5	4,287	n.	22	n.	28	19	7	4	2.9	0.2	0.0
Charleston	48	11	92	30.10	30.16	+.04	60.1	+2.0	82	7	68	34	29	52	26	53	50	76	0.10	-2.8	4	7,238	nw.	37	n.	28	11	15	4	4.3	0.0	0.0
Columbia, S. C	351	41	57	29.79	30.18	+.06	55.5	+1.7	78	15	66	27	29	45	32	47	41	68	0.44	-1.8	3	3,923	ne.	20	n.	28	18	7	5	3.7	T.	0.0
Due West	711	10	55	29.41	30.20		52.8		78	3	63	23	29	42	32				0.52		4	5,135	sw.	24	n.	28	14	8	8	4.5	0.0	0.0
Greenville, S. C	1,039	113	122	29.05	30.16		52.4		76	3	62	26	29	43	28	45	40	69	0.48		6	5,385	ne.	26	ne.	28	19	6	5	3.2	T.	0.0
Augusta	180	62	77	29.96	30.16	+.03	56.8	+2.3	80	15	67	28	29	47	37	50	47	78	0.49	-2.4	5	3,110	nw.	21	n.	28	13	12	5	4.6	T.	0.0
Savannah	65	150	194	30.08	30.15	+.03	60.8	+3.3	82	3	69	33	29	52	26	53	49	76	0.01	-2.4	1	7,975	ne.	48	nw.	28	14	11	5	4.1	0.0	0.0
Jacksonville	43	209	245	30.08	30.13	+.03	64.8	+2.6	83	15	72	37	27	58	30	58	54	77	0.58	-1.6	1	8,475	n.	37	n.	28	12	11	7	5.0	0.0	0.0
Florida Peninsula.							72.8	+1.8										76	3.27	+1.1										5.1		
Key West	22	10	64	30.02	30.04	+.02	75.6	+1.3	85	26	80	60	29	71	13	70	68	80	3.36	+1.0	11	8,113	e.	44	w.	24	11	12	7	4.8	0.0	0.0
Miami	25	71	79	30.04	30.07		73.1	+1.1	83	1	78	52	29	68	20	67	64	75	5.44	+2.9	16	6,608	e.	27	ne.	11	9	11	10	5.7	0.0	0.0
Sand Key	23	39	72	30.02	30.05	+.03	75.2		82	22	78	62	29	72	10	70	67	74	3.87		12	12,908	e.	42	nw.	27	10	16	4	4.9	0.0	0.0
Tampa	35	79	92	30.06	30.10	+.02	69.8	+3.0	84	4	78	43	29	62	24	62	59	76	1.01	-0.7	4	4,707	e.	24	n.	28	9	16	5	5.0	0.0	0.0
East Gulf States.							59.2	+3.2										75	2.08	-1.4										5.0		
Atlanta	1,174	190	216	28.92	30.17	+.04	52.9	+0.8	75	3	62	28	29	44	24	48	45	80	1.42	-2.0	7	8,702	nw.	40	nw.	28	15	4	11	4.4	0.0	0.0
Macon	370	78	87	29.78	30.18	+.05	56.6	+3.3	79	15	67	27	29	46	38	49	44	72	0.54	-2.6	5	4,081	e.	26	nw.	27	9	12	9	5.3	0.1	0.0
Thomasville	273	49	58	29.84	30.14	+.02	62.2	+3.7	83	2	72	32	29	52	30	54	50	76	1.10	-1.5	3	3,024	ne.	18	sw.	27	8	15	7	5.2	0.0	0.0
Apalachicola	36	42	49	30.09	30.13		64.5		80	3	71	39	29	58	26	59	56	79	0.72		2	6,219	ne.	28	n.	19	13	10	7	4.4	0.0	0.0
Pensacola	56	149	185	30.07	30.13	+.02	63.4	+3.2	79	3	70	38	26	57	26	58	54	76	0.72	-3.0	5	9,444	ne.	31	w.	27	7	11	12	5.8	0.0	0.0
Anniston	741	9	57	29.38	30.20	+.08	53.8	+1.9	78	3	65	22	29	43	39				1.83	-1.6	6	4,175	se.	28	nw.	27	14	9	7	4.4	T.	0.0
Birmingham	700	11	48	29.42	30.20	+.08	56.4	+2.3	80	1	66	30	25	46	29	48	42	68	2.59	-0.8	8	4,960	n.	30	nw.	27	15	8	7	3.9	0.0	0.0
Mobile	57	125	161	30.08	30.14	+.03	62.8	+3.8	84	2	71	38	26	55	28	57	54	79	3.98	+0.2	7	6,975	n.	28	n.	28	9	11	10	5.8	0.0	0.0
Montgomery	223	100	112	29.92	30.18	+.06	59.2	+3.4	82	6	69	32	29	49	37	51	46	70	1.27	-1.9	5	4,658	se.	26	nw.	27	13	8	9	4.7	T.	0.0
Corinth	469	6					54.1		82	12	66	26	29	42	37				4.12		6		se.				7	20	3		0.0	0.0
Meridian	375	85	93	29.76	30.16	+.04	58.4	+5.2	81	3	68	34	29	48	30	51	47	74	2.54	-1.6	9	3,654	n.	23	sw.	27	12	9	9	4.9	T.	0.0
Vicksburg	247	65	73	29.88	30.17	+.05	59.4	+2.8	84	4	69	35	21	50	28	52	47	73	3.55	-0.6	8	4,633	se.	22	w.	27	10	7	13	5.4	0.0	0.0
New Orleans	53	76	84	30.06	30.12	+.02	66.5	+4.9	85	6	74	44	26	60	25	59	55	73	3.38	-0.4	6	5,039	ne.	23	w.	27	8	12	10	5.5	0.0	0.0
West Gulf States.							59.0	+2.6										76	2.82	-0.3										6.1		
Shreveport	249	77	93	29.88	30.16	+.05	58.3	+3.0	85	3	68	36	21	48	29	51	46	75	2.01	-2.1	8	4,546	n.	22	se.	30	16	5	9	4.6	0.0	0.0
Bentonville	1,303	11	44				50.1	+3.4	79	3	61	26	20	39	35				6.75		7						17	7	6		0.0	0.0
Fort Smith	457	79	94	29.65	30.14	+.03	53.4	+3.5	81	4	63	32	26	44	32	46	40	67	5.28	+2.0	7	5,641	e.	48	w.	12	12	11	7	4.8	0.0	0.0
Little Rock	357	136	144	29.76	30.15	+.03	54.3	+2.8	81	5	64	30	26	45	31	47	41	70	2.07	-2.5	9	5,481	n.	41	nw.	27	13	7	10	4.8	0.0	0.0
Brownsville	57	4	26	29.99	30.05		67.6		86	6	75	49	25	60	31	62	60	87	3.67		9	6,001	nw.	32	s.	30	7	10	13	6.3	0.0	0.0
Corpus Christi	20	11	73	30.06	30.08	+.01	66.2	+2.8	84	6	72	45	26	60	35	62	59	82	3.47	+1.1	10	8,932	n.	42	nw.	6	4	8	18	7.4	0.0	0.0
Dallas	512	109	117	29.58	30.13		57.4		82	3	67	37	20	48	30				2.94		10	5,926	nw.	30	nw.	12	7	9	14	6.2	0.0	0.0
Fort Worth	670	106	114	29.40	30.12	+.02	57.5	+2.4	82	3	66	38	13	49	30	50	44	68	2.57	+1.0	6	6,478	se.	31	se.	4	7	13	10	5.4	0.0	0.0
Galveston	54	106	114	30.05	30.11	+.02	65.6	+2.3	79	6	71	48	26	60	25	61	58	82	2.54	-1.5	5	8,198	n.	26	n.	21	5	12	13	6.3	0.0	0.0
Groesbeck	461	11	56	29.62	30.10		58.8		85	4	68	36	26	49	32				2.02		8	7,153	n.	34	s.	30	6	10	14	6.3	0.0	0.0
Houston	138	111	121	29.94	30.10		64.2	+2.9	84	4	72	42	26	56	32				3.82		5	5,884	n.	26	se.	10	5	7	18	6.7	0.0	0.0
Palestine	510	64	72	29.59	30.13	+.02	58.2	+1.3	82	3	67	37	26	49	30	51	47	73	4.37	+0.7	10	5,200	ne.	28	s.	30	8	10	12	6.1	0.0	0.0
Port Arthur	34	58	66	30.06	30.10		63.8		81	6	71	41	26	57	30	58	55	79	1.78		5	6,664	ne.	24	ne.	20	8	4	18	6.6	0.0	0.0
San Antonio	701	119	132	29.36	30.09	+.01	61.9	+2.7	83	3	70	41	13	54	33	55	51	74	0.98	-0.8	12	5,966	n.	28	n.	12	6	7	17	7.0	0.0	0.0
Taylor	582	55	63	29.51	30.13	+.05	59.6	+1.9	83	3	68	38	13	51	36				2.10	-0.5	7	5,868	n.	26	se.	24	5	8	17	7.0	0.0	0.0

TABLE 1.—*Climatological data for Weather Bureau stations, November, 1922*—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 dewpoint.	Mean relative humidity.	Total.	Departure from normal.	Days with .01, or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet, and ice on ground at end of month.
	Ft.	Ft.	Ft.	In.	In.	In.	° F.	° F.	° F		° F	° F.		° F	° F.	° F.	° F.	%	In.	In.		Miles.								0-10	In.	In.
Ohio Valley and Tennessee.							47.6	+2.7										71	1.72	−1.7										5.5		
Chattanooga	762	189	213	29.38	30.20	+.06	52.2	+1.8	79	3	62	26	29	43	30	44	37	63	1.24	−2.3	9	5,701	nw.	28	nw.	28	14	9	7	4.1	T.	0.0
Knoxville	996	102	111	29.12	30.20	+.07	49.1	+2.0	72	1	59	21	26	39	31	43	38	72	1.80	−1.8	6	3,657	ne.	24	sw.	27	13	6	11	4.9	1.8	0.0
Memphis	399	76	97	29.77	30.21	+.09	54.8	+3.1	80	4	63	32	25	46	26	47	41	66	3.50	−1.1	6	5,707	n.	40	nw.	27	11	11	8	4.1	0.0	0.0
Nashville	546	168	191	29.60	30.20	+.08	51.3	+2.3	79	1	61	24	26	42	32	44	38	67	1.80	−2.0	6	7,010	s.	43	s.	1	15	8	7	4.0	0.0	0.0
Lexington	989	193	230	29.09	30.18	+.06	47.2	+2.5	76	1	55	20	25	39	27	.....	.....	.....	0.88	−2.6	6	10,204	sw.	36	se.	1	14	7	9	4.4	0.6	0.0
Louisville	525	219	255	29.59	30.18	+.06	48.4	+1.7	75	1	59	23	25	41	25	42	36	66	1.83	−2.4	5	8,379	s.	34	sw.	23	16	8	6	4.3	0.1	0.0
Evansville	431	139	175	29.70	30.18	+.06	49.3	+4.0	78	1	58	24	25	41	26	43	38	71	1.64	−2.5	8	8,054	sw.	37	sw.	1	11	12	7	4.7	3.1	0.0
Indianapolis	822	194	230	29.24	30.15	+.05	45.4	+3.8	69	12	52	22	25	38	24	40	36	73	2.32	−1.2	10	8,925	s.	39	sw.	23	8	8	14	6.0	0.2	0.0
Royal Center	736	11	55	29.30	30.12	.....	42.6	.....	68	5	50	21	25	38	26	.....	.....	.....	2.15	.....	12	8,000	w.	34	sw.	1	4	6	20	7.6	0.1	0.0
Terre Haute	575	96	129	29.51	30.14	.....	46.0	.....	71	5	54	20	25	38	25	41	37	76	1.22	.....	9	7,217	s.	28	s.	30	9	12	9	5.6	T.	0.0
Cincinnati	628	11	51	29.47	30.16	+.04	46.4	+3.9	73	2	55	22	26	38	28	.....	36	72	1.88	−1.3	7	5,576	sw.	27	sw.	2	10	10	10	5.3	0.7	0.0
Columbus	824	179	222	29.25	30.14	+.03	44.4	+2.5	69	2	52	20	25	37	26	39	35	74	1.57	−1.5	10	8,225	s.	37	nw.	24	6	7	17	6.9	1.0	0.0
Dayton	899	181	216	29.16	30.14	.....	45.3	+3.2	71	1	53	23	26	38	26	40	35	73	1.79	−1.1	8	8,170	sw.	32	w.	23	11	8	11	5.2	1.3	0.0
Elkins	1,947	59	67	28.07	30.18	+.06	41.8	+2.2	74	1	53	17	29	31	51	36	33	81	1.55	−1.3	11	3,840	w.	30	w.	24	5	8	17	7.2	4.6	T.
Parkersburg	638	77	84	29.50	30.17	+.05	46.0	+2.8	75	2	55	20	29	38	32	40	35	71	0.97	−1.9	7	4,062	se.	29	nw.	23	9	5	16	6.3	0.4	0.0
Pittsburgh	842	353	410	29.21	30.13	+.03	45.3	+2.1	69	1	52	23	29	39	33	40	35	72	1.31	−1.2	8	8,730	sw.	47	nw.	23	5	3	22	7.8	1.0	0.0
Lower Lake Region.							42.2	+2.8										75	1.37	−1.6										7.8		
Buffalo	767	247	280	29.20	30.05	.00	42.0	+2.6	64	1	48	22	26	36	32	40	37	85	1.08	−2.3	15	13,370	nw.	62	sw.	23	2	6	22	8.0	3.1	0.0
Canton	448	10	61	29.51	30.00	.....	37.0	+3.1	61	2	44	16	29	30	33	.....	.....	.....	1.66	−1.8	15	7,242	w.	45	sw.	17	2	5	23	8.2	1.7	0.0
Oswego	335	76	91	.....	30.03	−.02	41.7	+2.8	63	11	47	23	25	36	24	.....	.....	.....	1.27	−2.1	12	8,002	nw.	34	nw.	24	2	1	27	.....	1.8	0.0
Rochester	523	86	102	29.47	30.05	.00	41.9	+3.2	64	11	48	21	26	36	28	37	32	71	1.12	−1.6	17	6,473	sw.	36	sw.	17	2	5	23	8.4	1.8	0.0
Syracuse	597	97	113	29.40	30.05	−.01	41.0	+2.3	62	11	47	21	26	35	23	.....	.....	.....	1.23	−1.5	16	7,867	w.	45	nw.	24	1	5	24	8.5	3.5	0.0
Erie	714	130	166	29.28	30.07	+.01	43.7	+2.3	65	2	49	25	29	38	25	39	33	69	2.99	−0.6	15	11,603	nw.	48	nw.	23	2	7	21	8.0	4.3	0.0
Cleveland	762	190	201	29.26	30.10	+.03	44.2	+3.3	67	6	50	21	29	38	28	39	34	70	1.37	−1.4	10	10,892	sw.	48	nw.	23	3	9	18	8.0	2.6	0.0
Sandusky	629	62	103	29.40	30.10	+.02	44.1	+3.3	67	6	50	24	29	38	25	.....	.....	.....	1.27	−1.5	10	10,640	sw.	43	nw.	23	3	9	18	7.7	1.8	0.0
Toledo	628	208	243	29.41	30.11	+.04	43.4	+3.0	65	6	50	24	25	37	23	39	35	75	0.96	−1.7	8	11,409	sw.	44	sw.	30	7	8	15	6.7	0.3	0.0
Fort Wayne	856	113	124	29.18	30.12	.....	42.2	+1.6	69	5	49	23	26	36	27	39	36	81	1.72	.....	13	7,766	sw.	32	sw.	30	5	8	17	7.2	0.6	0.0
Detroit	730	218	258	29.28	30.09	+.03	42.7	+3.4	63	6	48	24	28	37	20	39	35	77	0.78	−1.8	11	9,542	sw.	37	sw.	29	5	5	20	7.6	1.4	0.0
Upper Lake Region.							39.5	+4.8										81	2.45	0.0										8.4		
Alpena	609	13	92	29.35	30.02	+.01	38.7	+4.3	61	17	44	21	28	33	26	36	33	82	2.61	0.0	16	8,879	nw.	39	sw.	17	1	4	25	8.8	1.2	0.0
Escanaba	612	54	60	29.34	30.02	−.01	37.8	+6.1	61	17	43	19	25	33	22	35	32	82	2.02	−0.2	13	7,412	sw.	36	ne.	19	3	3	24	8.4	1.7	0.0
Grand Haven	632	54	89	29.36	30.05	+.01	43.0	+5.0	62	5	48	26	24	38	22	40	37	80	3.63	+1.1	18	11,055	sw.	39	s.	30	0	5	25	9.2	3.3	0.0
Grand Rapids	707	70	87	29.29	30.07	+.02	42.4	+4.3	62	5	48	25	24	37	24	38	35	76	2.39	−0.1	16	5,140	s.	27	w.	23	1	3	26	9.0	2.0	0.0
Houghton	684	62	99	29.27	30.01	−.01	36.2	+4.7	52	5	41	19	25	32	23	.....	.....	.....	2.10	−0.7	20	7,198	e.	46	sw.	30	0	4	26	9.3	6.0	0.6
Lansing	878	11	62	29.10	30.07	.....	40.7	+3.9	62	5	47	21	28	34	25	37	34	83	1.79	−0.6	16	5,273	sw.	23	nw.	23	2	6	22	8.1	3.5	0.0
Ludington	637	60	66	29.33	30.04	.....	41.8	.....	62	5	46	26	24	37	18	39	35	79	2.02	.....	20	10,396	sw.	39	s.	30	2	3	25	8.4	1.8	0.0
Marquette	734	77	111	29.22	30.03	+.01	37.6	+5.7	61	17	42	21	25	33	25	34	31	80	2.84	0.0	20	7,974	nw.	45	s.	30	1	2	27	9.1	5.0	0.3
Port Huron	638	70	120	29.35	30.06	+.01	40.9	+3.4	64	6	47	20	28	35	24	37	34	80	0.74	−1.9	10	9,220	sw.	42	nw.	23	1	12	17	7.2	2.4	0.0
Saginaw	641	69	77	29.35	30.06	.....	40.4	.....	61	6	46	17	28	34	21	37	35	84	1.66	−0.6	13	6,923	sw.	32	sw.	30	2	6	22	8.5	2.5	0.0
Sault Sainte Marie	614	11	52	29.31	30.02	+.01	35.4	+4.7	54	30	41	12	28	30	24	33	31	86	3.55	+0.6	17	6,435	nw.	33	nw.	23	2	5	23	8.5	6.8	T
Chicago	823	140	310	29.18	30.09	+.02	44.6	+3.4	66	5	50	21	25	39	19	40	36	73	2.66	+0.2	12	9,709	w.	44	sw.	30	5	5	20	7.5	0.2	0.0
Green Bay	617	109	144	29.34	30.01	−.03	39.8	+7.3	59	11	45	22	25	35	20	37	33	78	2.25	+0.3	12	9,273	s.	46	s.	30	1	6	23	8.5	T.	0.0
Milwaukee	681	125	139	29.30	30.05	.00	42.0	+5.9	62	11	47	22	25	37	24	39	36	80	2.47	+0.5	11	8,524	w.	40	sw.	30	5	5	20	7.7	T.	0.0
Duluth	1,133	11	47	28.76	30.00	−.04	34.2	+4.2	55	17	39	10	25	29	23	33	31	90	3.57	+2.0	14	9,596	ne.	68	sw.	30	4	1	25	8.2	5.6	T
North Dakota.							32.7	+6.4										85	2.02	+1.3										8.0		
Moorhead	940	50	58	28.98	30.02	−.05	34.2	+7.1	53	4	40	9	30	29	24	33	31	89	2.83	+1.8	14	6,046	n.	30	se.	5	2	3	25	8.7	3.9	2.2
Bismarck	1,674	8	57	28.26	30.10	+.03	33.2	+4.7	52	5	40	11	30	27	28	31	28	85	1.51	+0.8	8	6,713	nw.	42	nw.	18	5	6	19	7.5	5.7	T.
Devils Lake	1,482	11	44	28.42	30.04	−.02	31.6	+9.0	52	16	38	4	30	25	27	29	27	88	2.38	+1.7	11	6,963	nw.	30	e.	5	3	4	23	8.2	3.5	2.2
Ellendale	1,457	10	56	.....	30.05	.....	32.8	.....	59	2	39	11	30	26	29	.....	.....	.....	2.73	.....	11	10,429	nw.	48	nw.	18	3	8	19	.....	12.4	5.5
Grand Forks	835	12	89	.....	.....	.....	33.2	.....	56	1	39	4	30	27	31	.....	.....	.....	3.30	.....	10	.....	nw.	.....	.....	.....	7	6	17	.....	7.1	4.8
Williston	1,878	41	48	28.06	30.09	+.03	31.9	+4.7	53	16	39	1	30	25	32	29	25	79	1.37	+0.8	8	5,667	nw.	36	nw.	18	5	5	20	7.7	8.0	1.5
Upper Mississippi Valley.							43.9	+5.5										77	3.17	+1.2										6.6		
Minneapolis	918	102	208	28.99	29.99	.....	39.6	.....	62	30	45	17	25	34	38	.....	.....	.....	3.57	+2.4	13	9,217	n.	46	sw.	30	3	4	23	8.5	0.8	0.0
St. Paul	837	236	261	29.09	30.01	−.05	38.8	+4.7	62	30	44	17	25	33	39	.....	.....	.....	3.70	+2.4	13	9,778	sw.	58	sw.	30	3	3	24	8.5	1.5	0.0
La Crosse	714	11	48	29.24	30.03	−.04	41.6	+6.4	63	10	48	15	25	36	29	.....	.....	.....	3.50	+2.0	11	4,333	s.	27	sw.	30	3	6	21	8.1	0.3	0.0
Madison	974	70	78	29.00	30.07	+.01	41.0	+6.8	62	5	47	17	25	35	24	37	34	82	3.14	+1.3	11	8,309	sw.	32	sw.	30	3	6	21	7.8	T.	0.0
Wausau	1,247	4	.....	28.67	30.03	.....	37.2	.....	57	3	42	18	25	32	23	.....	.....	.....	2.10	.....	14	.....	se.	.....	.....	.....	4	1	25	8.5	0.7	0.0
Charles City	1,015	10	49	28.95	30.05	−.03	40.0	+7.0	64	30	46	15	25	34	34	37	34	84	3.14	+1.8	10	6,344	sw.	34	sw.	30	4	9	17	7.3	0.8	0.0
Davenport	606	71	79	29.42	30.09	+.01	43.9	+6.4	65	5	50	19	25	37	26	40	36	77	3.12	+1.4	9	6,095	sw.	29	ne.	12	6	8	16	6.6	1.5	0.0
Des Moines	861	84	97	29.13	30.06	−.02	44.0	+7.2	69	30	52	19	25	37	35	40	36	78	2.54	+1.1	9	6,598	sw.	52	sw.	30	14	6	10	5.0	T.	0.0
Dubuque	698	81	96	29.32	30.08	+.01	42.7	+5.7	64	2	49	19	25	37	27	38	34	76	4.41	+2.6	10	5,273	nw.	24	nw.	23	4	8	18	7.2	1.2	0.0
Keokuk	614	64	78	29.42	30.11	+.02	45.4	+6.0	65	3	53	22	25	38	25	40	35	73	3.38	+1.5	11	6,372	sw.	36	s.	5	9	13	8	5.3	0.0	0.0
Cairo	358	87	93	29.77	30.16	+.04	50.7	+3.4	75	2	59	27	26	42	27	44	39	70	1.98	−2.0	9	6,118	s.	37	nw.	27	11	9	10	5.1	T.	0.0
Peoria	609	11	45	29.14	30.11	+.02	43.2	+5.7	68	5	50	17	25	36	25	39	37	84	3.67	+1.0	11	5,393	s.	24	w.	7	10	9	11	5.7	2.5	0.0
Springfield, Ill	644	10	91	29.42	30.11	+.01	45.2	+3.0	71	5	52	21	25	38	22	40	37	80	2.53	−0.1	10	6,599	w.	28	s.	5	10	8	12	5.7	1.0	0.0
Hannibal	534	74	109	29.52	30.10	+.01	46.0	+5.5	68	3	53	24	25	39	24	.....	.....	.....	3.36	+1.4	10	6,876	sw.	31	s.	1	12	10	8	4.9	0.0	0.0
St. Louis	567	265	303	29.51	30.13	+.03	48.8	+3.7	73	5	56	25	25	42	24	43	37	69	2.36	−0.5	10	9,784	s.	44	s.	5	11	10	9	4.8	T.	0.0
Missouri Valley.							43.0	+4.9										75	3.19	+2.0										4.9		
Columbia, Mo	781	11	84	29.26	30.10	+.01	47.4	+5.0	73	3	56	22	25	38	27	.....	.....	.....	2.37	+0.1	8	6,519	sw.	34	nw.	27	14	8	8	4.3	0.0	0.0
Kansas City	963	161	181	29.05	30.11	+.02	47.8	+6.3	73	4	56	25	25	40	23	42	36	69	3.17	+1.3	10	8,426	sw.	48	nw.	27	18	6	6	3.6	0.0	0.0
St. Joseph	967	11	49	29.03	30.08	.....	46.3	.....	74	3	54	24	25	38	29	40	35	71	4.99	.....	10	6,934	nw.	37	nw.	27	17	6	7	3.8	0.0	0.0
Springfield, Mo	1,324	98	104	28.72	30.14	+.04	48.1	+3.7	75	3	57	26	20	39	28	41	35	67	4.14	+1.5	6	7,874	se.	38	sw.	1	14	11	5	4.0	0.0	0.0
Iola	984	11	50	29.05	30.12	+.03	47.8	+4.8	78	4	59	25	28	37	32	.....	.....	.....	3.01	+1.6	6	5,335	se.	32	w.	12	14	7	9	4.6	0.0	0.0
Topeka	987	92	107	.....	.....	.....	47.0	+5.3	76	4	57	25	25	37	31	.....	.....	.....	4.83	+3.6	8	7,980	w.	46	n.	27	17	6	7	3.7	0.0	0.0
Drexel	1,299	10	54	28.64	30.04	.....	41.6	.....	70	3	50	20	25	33	33	.....	.....	.....	3.57	.....	7	9,665	sw.	52	sw.	30	13	5	12	5.0	0.0	0.0
Lincoln	1,189	11	84	28.78	30.08	.00	43.6	+5.6	72	3	53	21	25	34	34	38	34	73	2.62	+1.8	8	8,713	s.	40	sw.	30	13	8	9	4.2	0.0	0.0
Omaha	1,105	115	122	28.87	30.08	.00	44.2	+6.5	72	3	52	25	24	36	32	39	35	75	2.55	+1.5	10	6,464	nw.	43	nw.	27	15	5	10	4.6	0.0	0.0
Valentine	2,598	47	54	27.31	30.08	.00	36.9	+3.2	63	4	47	12	14	27	34	33	28	75	2.74	+2.0	6	7,593	w.	46	nw.	5	11	10	9	4.9	5.9	T.
Sioux City	1,135	94	164	28.83	30.07	−.01	41.2	+6.9	64	3	48	21	24	34	31	37	33	76	4.41	+3.4	8	10,930	nw.	56	sw.	30	9	8	13	5.8	T.	0.0
Huron	1,306	59	74	28.64	30.08	.00	35.2	+3.7	61	4	42	12	15	28	26	33	31	86	2.72	+2.1	9	7,651	nw.	42	w.	5	9	1	20	6.8	11.5	T.
Pierre	1,572	70	75	28.37	30.08	.00	36.7	+3.1	64	28	44	17	20	29	32	33	30	81	3.16	+2.7	8	7,262	nw.	52	nw.	6	8	5	17	6.4	13.9	3.3
Yankton	1,233	49	57	28.70	30.04	−.04	40.4	+5.0	68	10	48	21	14	33	32	.....	.....	.....	2.57	+1.8	8	7,415	w.	41	sw.	30	7	9	14	6.3	5.0	0.0

TABLE 1.—*Climatological data for Weather Bureau stations, November, 1922*—Continued.

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.									Mean wet thermometer.	Mean temperature of the dewpoint.	Mean relative humidity.	Precipitation.			Wind.					Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet, and ice on ground at end of month.
	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.				Total.	Departure from normal.	Days with .01, or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.						
	Ft.	Ft.	Ft.	In.	In.	In.	° F.	° F.	° F		° F	° F.		° F	° F.	° F.	° F.	%	In.	In.		Miles.							0-10	In.	In.
Northern Slope.							31.0	−1.3										73	1.51	+0.7									5.4		
Billings	3,140	5	.....	.....	.....	.....	31.0	.....	65	26	40	−4	13	22	32	.....	.....	.....	1.47	.....	7	.....	nw.	.....	.....	.....	20	3	7	.....	14.2	0.0
Havre	2,505	11	44	27.44	30.16	+.13	30.8	−0.4	63	26	43	−5	30	19	39	26	22	79	0.54	−0.2	7	4,615	sw.	34	sw.	15	11	9	10	4.9	4.8	3.2
Helena	4,110	87	112	25.89	30.22	+.15	29.5	−3.2	60	26	38	8	13	21	29	25	21	75	1.04	+0.3	7	4,427	sw.	42	sw.	18	10	6	14	5.8	13.0	2.5
Kalispell	2,973	48	56	27.07	30.22	+.15	30.0	−2.0	49	8	37	16	30	23	25	27	24	78	1.06	−0.8	6	2,646	nw.	36	sw.	17	9	4	17	6.6	5.3	3.3
Miles City	2,371	48	55	27.56	30.18	+.11	35.3	+4.4	62	26	45	10	30	26	34	30	24	68	0.44	−0.2	7	4,358	sw.	36	nw.	18	11	6	13	5.6	0.5	0.4
Rapid City	3,259	50	58	26.64	30.14	+.06	35.7	+2.1	63	28	44	14	30	27	33	31	25	68	3.24	+2.8	9	6,081	nw.	48	nw.	5	10	7	13	5.6	10.1	0.6
Cheyenne	6,088	84	101	24.00	30.14	+.07	31.4	−3.5	55	16	41	10	13	22	34	27	22	70	2.40	+2.0	7	9,103	nw.	62	w.	18	13	7	10	4.9	22.5	0.5
Lander	5,372	60	68	24.70	30.27	+.17	21.3	−7.4	50	18	30	−3	24	12	34	18	14	74	1.57	+1.0	6	1,882	w.	20	nw.	18	11	5	14	5.8	13.7	2.0
Sheridan	3,790	10	47	26.17	30.18	.....	32.8	.....	61	26	43	3	12	23	34	28	24	76	1.16	.....	9	3,411	nw.	40	nw.	5	9	10	11	5.3	6.6	T.
Yellowstone	6,200	11	48	23.92	30.25	+.14	25.8	−3.5	49	27	36	−1	13	16	31	21	17	74	0.96	−0.5	12	4,336	s.	31	n.	18	10	9	11	5.2	11.9	4.4
North Platte	2,821	11	51	27.13	30.13	+.05	38.8	+2.2	65	3	50	11	13	27	39	33	28	74	2.35	+2.0	5	5,807	w.	39	nw.	5	12	6	12	4.8	5.5	0.0
Middle Slope.							44.0	+2.1										69	2.32	+1.4									4.0		
Denver	5,292	106	113	24.74	30.12	+.06	37.2	−2.6	62	26	47	2	13	27	31	31	24	65	1.95	+1.4	5	4,980	s.	40	nw.	4	10	12	8	3.8	15.4	0.0
Pueblo	4,685	80	86	25.32	30.10	+.05	37.6	−1.7	68	10	50	5	13	25	42	31	24	66	1.26	+0.9	7	4,394	nw.	44	nw.	4	9	12	9	5.6	12.2	0.0
Concordia	1,392	50	58	28.60	30.10	+.02	44.8	+4.9	72	4	55	22	20	35	33	39	34	72	2.05	+1.1	6	7,002	s.	36	nw.	1	15	7	8	4.5	T	0.0
Dodge City	2,509	11	51	27.48	30.13	+.06	45.5	+5.0	75	2	58	18	14	33	39	38	32	68	0.95	+0.4	6	8,867	nw.	49	sw.	4	17	9	4	3.3	T.	0.0
Wichita	1,358	139	158	28.64	30.10	+.02	47.6	+3.8	72	2	56	28	14	39	31	41	36	69	5.35	+4.2	7	9,989	s.	53	w.	4	16	7	7	3.7	0.0	0.0
Altus	1,410	5	.....	.....	.....	.....	53.4	.....	77	3	66	26	14	41	37	.....	.....	.....	1.03	.....	6	.....	se.	.....	.....	.....	17	4	9	.....	0.0	0.0
Broken Arrow	765	11	52	29.31	30.14	.....	50.9	.....	80	4	62	29	20	40	34	.....	.....	.....	4.77	.....	7	8,267	n.	42	se.	4	14	8	8	4.3	0.0	0.0
Muskogee	652	4	.....	.....	.....	.....	52.9	.....	84	2	65	28	28	41	42	.....	.....	.....	7.36	.....	7	.....	w.	.....	.....	.....	14	9	7	.....	0.0	0.0
Oklahoma City	1,214	10	47	28.84	30.15	+.07	51.3	+3.4	75	2	61	29	14	42	31	44	40	74	2.37	+0.1	7	7,733	s.	35	se.	4	18	10	2	3.1	0.0	0.0
Southern Slope.							52.6	+1.7										65	1.04	−0.2									4.9		
Abilene	1,738	10	52	28.29	30.12	+.05	55.1	+2.5	80	4	65	31	14	45	35	47	42	71	1.97	+0.7	8	6,387	se.	34	s.	4	9	10	11	5.4	T.	0.0
Amarillo	3,676	10	49	26.33	30.11	+.06	47.2	+3.4	77	2	59	17	13	35	40	39	34	68	1.39	+0.2	7	8,044	s.	44	sw.	4	18	7	5	3.5	0.1	0.0
Del Rio	944	64	71	29.08	30.08	+.03	61.3	+2.0	82	4	70	39	27	53	37	.....	.....	.....	0.28	−0.9	5	6,161	se.	32	n.	13	5	8	17	7.1	0.0	0.0
Roswell	3,566	75	85	26.42	30.07	+.04	47.0	−1.1	78	10	60	17	14	34	44	38	28	56	0.53	−0.6	6	5,327	s.	35	w.	4	16	7	7	3.6	0.0	0.0
Southern Plateau.							46.1	−2.9										58	0.71	+0.1									2.4		
El Paso	3,762	110	133	26.22	30.02	+.02	50.1	−0.8	77	8	62	27	13	38	34	40	30	53	0.29	−0.3	5	7,955	e.	43	e.	15	19	6	5	2.8	T.	0.0
Santa Fe	7,013	38	53	23.24	30.08	+.05	35.8	−2.4	60	9	46	14	13	26	31	29	24	69	1.13	+0.4	8	4,386	se.	33	w.	4	17	3	10	4.3	8.8	0.4
Flagstaff	6,908	10	59	23.32	30.01	−.01	33.0	−1.6	59	18	45	−1	4	21	40	26	.....	67	2.31	.....	7	6,023	w.	36	sw.	3	19	6	5	.....	21.6	10.0
Phoenix	1,108	11	81	28.82	30.00	+.02	55.0	−3.7	80	19	71	32	5	39	40	43	32	51	1.04	+0.1	3	3,461	e.	24	e.	15	25	3	2	1.4	0.0	0.0
Yuma	141	9	54	29.86	30.02	+.04	58.3	−4.1	80	19	73	34	4	44	37	47	38	53	0.66	+0.3	2	2,988	n.	21	n.	21	26	4	0	0.9	0.0	0.0
Independence	3,957	9	41	26.02	30.11	+.06	44.6	−4.6	69	15	58	19	30	32	35	35	27	58	0.44	+0.2	1	4,535	nw.	28	se.	9	19	7	4	2.8	0.0	0.0
Middle Plateau.							36.4	−3.3										64	1.10	+0.2									4.2		
Reno	4,532	74	81	25.54	30.17	+.06	36.8	−4.2	62	17	50	8	30	24	39	30	23	65	0.97	−0.1	7	3,099	w.	32	w.	7	17	6	7	3.5	8.5	3.8
Tonopah	6,090	12	20	24.09	30.11	.....	36.4	.....	56	18	45	13	3	28	24	30	20	53	0.41	−0.5	3	5,871	w.	37	se.	9	15	12	3	3.5	1.0	0.5
Winnemucca	4,344	18	56	25.70	30.20	+.06	33.6	−3.9	62	17	48	6	30	19	44	27	21	68	0.52	−0.2	6	4,281	ne.	27	sw.	17	13	8	9	4.7	2.6	T.
Modena	5,479	10	43	24.64	30.09	+.01	34.2	−4.8	62	18	47	12	4	22	42	27	20	62	1.00	+0.4	5	5,763	w.	38	s.	9	15	10	5	3.6	9.5	4.8
Salt Lake City	4,360	163	203	25.69	30.13	+.01	38.0	−3.1	56	9	45	25	14	31	21	33	29	71	3.33	+1.9	10	3,665	se.	39	s.	9	13	3	14	5.5	18.2	6.5
Grand Junction	4,602	60	68	25.42	30.05	−.03	39.4	−0.5	62	3	51	20	14	28	31	32	26	63	0.38	−0.2	5	3,565	se.	35	s.	3	13	10	7	4.5	T.	0.0
Northern Plateau.							35.7	−3.2										76	0.62	−0.8									6.9		
Baker	3,471	48	53	26.56	30.23	+.07	33.4	−1.5	55	17	43	12	30	24	26	30	23	72	0.52	−0.7	5	4,118	se.	25	nw.	2	12	4	14	5.6	T.	0.0
Boise	2,739	78	86	27.30	30.22	+.05	37.0	−2.6	58	7	47	17	30	27	25	33	27	67	0.52	−0.3	4	2,750	se.	21	se.	12	14	8	8	4.5	T.	0.0
Lewiston	757	40	48	29.42	30.25	+.13	38.4	−2.5	61	17	46	23	3	31	28	.....	.....	.....	0.97	−0.4	6	1,643	e.	25	w.	17	3	3	24	8.5	0.7	T.
Pocatello	4,477	60	68	25.55	30.19	+.05	34.0	−2.3	52	16	43	15	22	25	33	29	25	74	0.49	−0.1	6	4,262	se.	40	sw.	18	11	4	15	5.9	1.3	0.0
Spokane	1,929	101	110	28.14	30.25	+.15	34.4	−4.1	52	9	40	24	22	29	20	32	30	83	0.30	−2.0	2	2,927	n.	36	sw.	17	2	7	21	8.2	T.	T.
Walla Walla	991	57	65	29.15	30.25	+.12	36.9	−6.0	59	17	41	26	3	33	22	35	33	84	0.95	−1.2	9	2,175	s.	30	w.	17	4	2	24	8.6	0.2	0.0
North Pacific Coast Region.							44.7	−1.1										84	2.63	−4.2									6.9		
North Head	211	11	56	29.89	30.12	+.07	47.8	+0.1	59	23	52	36	30	44	15	44	40	79	3.54	−2.8	15	8,481	e.	62	s.	15	14	9	7	4.5	0.0	0.0
Port Angeles	29	8	53	30.11	30.14	.....	41.7	.....	56	6	48	30	29	36	20	.....	.....	.....	1.56	−2.9	11	3,822	s.	38	sw.	17	4	3	23	8.1	0.0	0.0
Seattle	125	215	250	30.04	30.17	+.13	43.6	−0.9	57	26	49	31	30	38	20	41	38	82	1.45	−4.4	9	4,468	se.	42	s.	17	5	9	16	6.9	0.0	0.0
Tacoma	213	113	120	29.94	30.17	+.13	41.9	−2.2	56	26	48	28	30	36	23	.....	.....	.....	1.48	−7.0	10	2,789	sw.	30	w.	17	3	6	21	7.8	0.0	0.0
Tatoosh Island	86	9	57	30.02	30.11	+.14	47.0	+1.1	53	4	50	40	29	44	11	44	43	88	4.85	−7.2	16	13,124	e.	68	s.	15	3	6	21	7.9	0.0	0.0
Yakima	1,071	5	.....	.....	.....	.....	36.7	.....	58	16	44	20	3	30	31	.....	.....	.....	0.11	.....	5	.....	nw	.....	.....	.....	.....	.....	.....	.....	T.	0.0
Medford	1,425	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Oreg.	153	68	106	30.00	30.17	+.07	43.6	−3.2	56	7	49	28	27	38	22	41	37	80	2.94	−3.5	14	4,179	se.	25	e.	6	8	7	15	6.3	T.	T.
Roseburg	510	9	57	29.60	30.16	+.04	44.3	−1.6	59	17	50	30	14	38	25	42	41	89	2.59	−1.8	14	1,417	ne.	15	w.	17	2	15	13	6.7	0.0	0.0
Middle Pacific Coast Region.							50.7	−3.0										76	3.28	+0.2									3.6		
Eureka	62	73	89	30.07	30.14	+.03	48.2	−2.8	61	6	54	34	3	42	20	46	44	86	3.32	−2.4	12	3,117	se.	30	n.	27	12	7	11	5.2	0.0	0.0
Point Reyes	490	7	18	29.53	30.05	.....	52.2	−0.8	71	26	57	42	29	48	20	.....	.....	.....	3.40	.....	4	13,280	nw.	72	nw.	28	15	8	7	3.8	0.0	0.0
Red Bluff	332	50	56	29.74	30.11	.00	49.4	−4.4	70	24	60	30	30	38	37	44	39	70	3.54	+0.4	4	3,850	nw.	30	n.	29	23	3	4	2.2	0.0	0.0
Sacramento	69	106	117	30.03	30.10	+.01	49.8	−3.8	63	24	58	36	22	41	25	46	41	73	3.03	+0.9	5	3,989	se.	26	s.	8	15	9	6	3.6	0.0	0.0
San Francisco	155	208	243	29.92	30.09	.00	54.3	−2.0	65	24	60	43	29	48	17	49	45	75	3.77	+1.3	4	4,730	nw.	30	w.	1	18	5	7	3.4	0.0	0.0
San Jose	141	12	110	29.95	30.10	.....	50.5	−3.9	68	25	62	30	29	39	33	.....	.....	.....	2.72	+0.8	5	3,871	s.	27	se.	7	16	9	5	3.6	0.0	0.0
South Pacific Coast Region.							55.9	−2.0										64	2.03	+0.8									2.9		
Fresno	327	89	98	29.75	30.12	+.06	51.0	−3.6	67	6	61	34	3	42	31	46	41	72	0.62	−0.4	5	3,292	nw.	29	sw.	9	17	3	10	4.2	0.0	0.0
Los Angeles	338	159	191	29.69	30.06	+.04	59.8	−1.1	82	26	69	43	30	51	23	49	38	53	1.44	0.0	5	4,150	ne.	26	sw.	9	22	3	5	2.2	0.0	0.0
San Diego	87	62	70	29.94	30.04	+.02	58.0	−1.7	79	26	67	45	18	49	30	50	43	64	0.75	−0.1	4	3,932	nw.	28	s.	9	21	7	2	2.3	0.0	0.0
San Luis Obispo	201	32	40	29.86	30.08	+.02	54.8	−1.5	82	26	67	32	3	42	43	46	40	67	5.30	+3.6	5	2,932	n.	17	se.	8	20	5	5	2.9	0.0	0.0
West Indies.																																
San Juan, P. R.	82	9	54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Panama Canal.																																
Balboa Heights	118	7	97	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colon	25	5	71	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alaska.																																
Juneau	80	11	54	29.68	29.77	.....	38.2	.....	52	7	43	21	17	34	20	36	34	87	11.43	.....	25	6,046	se.	38	se.	20	3	3	24	8.5	8.9	T.

TABLE 2.—*Data furnished by the Canadian Meteorological Service, November, 1922.*

Stations.	Altitude above mean sea level, Jan. 1, 1919.	Pressure. Station reduced to mean of 24 hours.	Pressure. Sea level reduced to mean of 24 hours.	Pressure. Departure from normal.	Temperature of the air. Mean max.+mean min.÷2.	Temperature of the air. Departure from normal.	Temperature of the air. Mean maximum.	Temperature of the air. Mean minimum.	Temperature of the air. Highest.	Temperature of the air. Lowest.	Precipitation. Total.	Precipitation. Departure from normal.	Precipitation. 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	29.72	29.77	−.18	35.3	−1.8	39.9	30.7	50	23	6.34	−0.90	12.0
Halifax, N. S	88	29.74	29.85	−.16	35.4	−1.9	41.3	29.4	52	22	1.94	−3.72	3.4
Yarmouth, N. S	65	29.81	29.88	−.14	37.4	−2.5	42.7	32.0	51	24	1.42	−3.14	2.8
Charlottetown, P. E. I	38	29.77	29.81	−.15	33.9	−1.6	38.3	29.6	49	21	1.29	−2.68	0.3
Chatham, N. B	28	29.79	29.82	−.15	29.6	−1.4	36.9	22.4	49	6	1.73	−2.02	7.8
Father Point, Que	20	29.90	29.92	−.04	27.5	−1.4	33.2	21.9	44	12	1.72	−1.39	12.4
Quebec, Que	296	29.63	29.97	−.05	31.5	+2.5	36.9	26.1	48	14	1.83	−1.93	9.9
Montreal, Que	187	29.75	29.96	−.07	35.7	+3.9	41.0	30.4	54	17	1.74	−2.00	1.9
Stonecliffe, Ont	489												
Ottawa, Ont	236	29.73	30.00	−.02	35.7	+4.0	42.1	29.3	60	18	1.44	−1.10	2.8
Kingston, Ont	285	29.70	30.02	−.02	39.4	+4.4	45.7	33.2	57	17	0.82	−2.42	0.8
Toronto, Ont	379	29.62	30.04	.00	40.7	+5.1	46.6	34.8	61	21	1.48	−1.66	5.3
Cochrane, Ont	930												
White River, Ont	1,244	28.62	29.97	−.01	27.0	+6.5	34.7	19.2	53	−8	1.72	−0.13	3.8
Port Stanley, Ont	592	29.43	30.09	+.04	41.7	+4.9	48.8	34.7	66	20	2.06	−1.31	12.4
Southampton, Ont	656	29.29			39.9	+4.9	45.8	34.0	66	22	2.37	−1.33	7.0
Parry Sound, Ont	688	29.28	29.98	−.03	36.0	+3.9	42.7	29.3	57	14	3.25	−1.12	12.2
Port Arthur, Ont	644	29.30	30.03	+.04	33.5	+9.5	38.5	28.5	51	11	1.93	+0.60	4.5
Winnipeg, Man	760												
Minnedosa, Man	1,690	28.18	30.05	+.01	27.9	+10.6	34.8	21.1	50	−3	2.79	+1.79	19.3
Le Pas, Man	860												
Qu'Appelle, Sask	2,115	27.74	30.05	+.05	27.1	+8.3	34.4	19.9	50	−14	2.10	+1.21	21.0
Medicine Hat, Alb	2,144												
Moose Jaw, Sask	1,759												
Swift Current, Sask	2,392	27.46	30.16	+.14	29.2	+6.0	39.1	19.4	59	−4	0.44	−0.25	4.4
Calgary, Alb	3,428												
Banff, Alb	4,521												
Edmonton, Alb	2,150												
Prince Albert, Sask	1,450	28.49	30.11	+.08	27.5	+12.1	35.3	19.8	49	−2	0.06	−0.77	0.5
Battleford, Sask	1,592	28.29	30.08	+.06	28.6	+12.3	38.9	18.4	55	0	T.	−0.58	T.
Kamloops, B. C	1,262												
Victoria, B. C	230	29.87	30.13	+.14	44.1	+0.9	48.5	39.7	56	36	1.91	−5.06	0.0
Barkerville, B. C	4,180												
Triangle Island, B. C	680												
Prince Rupert, B. C	170												
Hamilton, Ber	151												

SEISMOLOGICAL REPORTS FOR NOVEMBER, 1922.

W. J. HUMPHREYS, Professor in Charge.

TABLE 1.—*Noninstrumental earthquake reports. November, 1922.*

[Weather Bureau, Washington, January 3, 1923.]

Day.	Approximate time, Greenwich civil.	Station.	Approximate latitude.	Approximate longitude.	Intensity Rossi-Forel.	Number of shocks.	Duration.	Sounds.	Remarks.	Observer.
		CALIFORNIA.								
1922.	*H. m.*		° ′	° ′			*Sec.*			
Nov. 4	3 18	Eureka	40 48	124 10	2	1	1	None	Felt by several	L. B. Cooper.
7	15 00	do	40 48	124 10	2	1	1	do	do	J. M. Jones.
28	3 00	Whittier	34 00	118 00						Press report.
		ILLINOIS.								
27	3 30?	Cairo	37 00	89 10	2			None	Felt by several	W. E. Barron.
	3 30	Clinton	40 10	89 00	2	2	Few.	do	Felt by one	Mrs. A. H. Montgomery
		Eldorado	37 50	88 30	8(?)	2	5	Loud	Felt by many	C. T. Wilson.
		McLeansboro	38 07	88 33	4	1	10	Rumbling	do	J. C. Carver.
		White Hall	39 25	90 30	Faint.	1	(?)	None	Felt by several	G. R. Adams.
		INDIANA.								
27	3 30	Mount Vernon	37 56	87 54		1	60		Felt by many	G. B. Green.
	? ?	Bedford	38 55	86 30	2	2	120,60	Rumbling	Felt by several	E. W. Moore.
		KENTUCKY.								
27	3 30	Bardwell	36 52	89 01					Barely noticeable	G. Jayner.
		Blandville	37 00	89 00	2	1		Rattling	Slight	E. W. Horr.
	3 28	Hickman	36 34	89 12	2	1		None	Felt by several	D. J. Oliver.
	3 30	Hopkinsville	36 50	87 30		1	Short.		do	W. E. Graves.
	3 32	Marion	37 20	88 00		1	75		do	B. C. Paris.
	3 30	Paducah	37 10	88 40	4	1	5ca.		Felt by many	J. T. Ross.
		Wycliffe	37 00	89 05	2	2	4	None	Felt by several	M. R. Jones.
		TENNESSEE.								
27	3 30	Clarksville	36 30	87 25	4?	1		Moaning	Felt by many	B. L. Miller.
	3 25	Dickson	36 10	87 30				None	Felt by one	J. M. Freeman.
	3 30 ca	Nashville	36 10	86 45	2	2	15-20	Rattling	do	Mrs. E. E. French.
		WYOMING.								
Oct. 25	2 30	Buffalo	44 20	106 40	4	1	60	Faint	Felt by two	A. Bulow.
Nov. 10	16 45	Yellowstone Park	45 00	110 40	2	1	2-3	None	Felt by several	E. Bowman.