of the month potatoes were coming up in the Hastings district of Florida and potatoes and early vegetables were being planted as far north as Arkansas.

The unusually mild weather produced conditions favorable for stock quite generally but at the same time there was a continued lack of moisture for ranges from eastern Colorado and western Kansas southward. There was enough moisture the latter part of the month to benefit ranges in southern New Mexico and the rain and heavy snow at higher altitudes were helpful in northern Arizona. The deep snow caused heavy feeding in Nevada.

The weather was generally favorable for fruit and there was no material frost damage. Peach trees were blooming in southern Texas at the close of the month and colder weather was needed in southern districts to check premature development.

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, January, 1923.

Section.	Temperature.								Precipitation.					
	Section average.	Departure from the normal.	Monthly extremes.						Section average.	Departure from the normal.	Greatest monthly.		Least monthly.	
			Station.	Highest.	Date.	Station.	Lowest.	Date.			Station.	Amount.	Station.	Amount.
	°F.	°F.		°F.			°F.		In.	In.		In.		In.
Alabama	52.0	+5.9	Auburn	81	21	2 stations	23	[2] 4	3.99	−0.89	Fayette	6.51	Tuskegee	1.37
Alaska														
Arizona	47.2	+4.0	2 stations	87	[2] 8	Williams	−5	28	0.66	−0.74	Fort Valley	2.59	4 stations	0.00
Arkansas	48.6	+7.7	Portland	80	14	Evening Shade	15	23	5.78	+1.55	Texarkana	9.71	Booneville	1.75
California	45.4	−0.4	Riverside	94	8	Madeline	−27	31	3.39	−2.10	Crescent City	12.46	2 stations	0.00
Colorado	29.5	+5.8	Canon City	79	18	2 stations	−32	6	0.51	−0.43	Crested Butte	3.04	16 stations	0.00
Florida	61.7	+2.6	Orlando	88	29	Garniers	27	[2] 5	1.75	−1.05	Fenholloway	6.09	Homestead	0.08
Georgia	51.3	+4.5	4 stations	81	[2] 22	Clayton	18	23	4.01	+0.07	Marshallville	7.41	St. Georges	0.62
Hawaii														
Idaho	28.3	+4.4	Lewiston	61	7	Obsidian	−30	29	2.56	+0.36	Wallace	10.00	Murphy	0.38
Illinois	33.8	+7.3	Carbondale	70	18	3 stations	5	[2] 10	1.74	−0.70	Cairo	7.01	Beardstown	0.57
Indiana	33.8	+5.2	2 stations	64	18	2 stations	4	[2] 10	2.92	−0.27	Rome	6.32	La Porte	0.60
Iowa	26.7	+8.8	do	58	17	do	−10	28	0.85	−0.20	Guthrie Center	2.34	Thurman	T.
Kansas	38.5	+8.6	do	79	17	do	5	[2] 22	0.13	−0.55	Pittsburg	1.99	19 stations	0.00
Kentucky	41.0	+5.8	do	68	[2] 11	Berea	11	17	6.11	+1.72	Bowling Green	8.94	Farmers	3.99
Louisiana	58.0	+6.8	6 stations	82	[2] 13	Minden	25	[2] 1	4.21	−0.34	Lakeside	12.94	Angola	1.15
Maryland-Delaware	34.8	+2.3	Cambridge, Md	68	21	Oakland, Md	0	17	4.20	+0.92	Grantsville, Md	6.14	Keedysville, Md	2.49
Michigan	21.3	+1.8	Houghton Lake	49	18	Humboldt	−25	23	1.82	−0.10	Grand Marais	6.56	Mount Clemens	0.55
Minnesota	12.5	+4.6	2 stations	49	[2] 6	Warroad	−39	5	0.97	+0.21	Colquet	2.48	Crookston	0.09
Mississippi	53.3	+6.5	Waynesboro	82	31	Austin	23	1	4.47	−0.47	Merrill	6.53	Fruitland Park	1.73
Missouri	39.2	+8.5	Hollister	75	18	Bethany (2)	3	[2] 6	2.72	+0.46	Vanduser	7.55	Oregon	0.12
Montana	25.4	+6.3	Roundup	70	[2] 21	2 stations	−31	[2] 30	1.20	+0.01	Heron	7.50	4 stations	T.
Nebraska	31.2	+9.1	Purdum	72	17	3 stations	−8	[2] 27	0.35	−0.21	Arden	1.51	do	0.00
Nevada	33.8	+3.8	Las Vegas	79	14	Rye Patch	−9	31	0.82	−0.27	McGill	2.11	Las Vegas	0.07
New England	18.3	−2.6	3 stations	55	1	Pittsburg, N. H.	−38	18	5.56	+2.22	Kingston, R. I.	8.97	Burlington, Vt	2.42
New Jersey	30.1	+0.2	Long Branch	66	21	Layton	−14	31	5.22	+1.57	Ridgefield	7.26	Pleasantville	3.41
New Mexico	38.8	+4.8	Artesia	82	11	Dulce	−24	28	0.33	−0.32	Batemans Ranch	1.82	40 stations	0.00
New York	20.7	−2.2	2 stations	54	[2] 1	Indian Lake	−36	7	4.39	+1.43	Scarsdale	9.76	Utica	1.54
North Carolina	44.0	+2.8	Smithfield	78	21	Parker	9	17	3.77	−0.07	Bryson City	6.72	Altapass	0.96
North Dakota	10.1	+5.2	Hettinger	56	9	Pembina	−35	5	0.53	−0.01	Forman	1.36	Parshall	0.00
Ohio	32.5	+4.1	Chilo	64	[2] 1	Milfordton	−4	17	3.46	+0.44	Green	6.17	Bowling Green	1.39
Oklahoma	47.5	+9.1	Woodward	83	17	Beaver	9	28	2.00	+0.80	Muskogee	6.23	9 stations	0.00
Oregon	36.3	+3.0	Pilot Rock	76	10	Fremont	−23	31	6.08	+1.65	Cascade Locks	24.92	Vale	0.29
Pennsylvania	29.1	+1.2	Marcus Hook	62	21	Hawley	−17	31	4.26	+0.82	Elk Lick	7.74	Ansonia	1.91
Porto Rico	72.4	−0.8	Utuado	93	29	Aibonito	46	5	2.81	−0.89	Comerio Falls	6.70	2 stations	0.00
South Carolina	49.0	+3.6	3 stations	80	[2] 21	Santuck	20	17	2.74	−0.72	Gaston Shoals	4.77	St. George	0.87
South Dakota	23.1	+7.9	Wagner	66	17	Pollock	−20	31	0.49	−0.05	Waters Ranch	2.58	2 stations	0.05
Tennessee	44.4	+5.5	Newport	72	21	2 stations	17	[2] 13	6.19	+1.19	Dover	8.73	Franklin	4.27
Texas	56.4	+8.0	2 stations	93	[2] 7	Clint	7	3	1.88	+0.13	Mount Pleasant	11.30	13 stations	0.00
Utah	31.6	+5.7	Springdale	70	[2] 9	Pine View	−12	15	1.42	−0.07	Park City	6.29	Lemay	T.
Virginia	38.7	+2.6	Cape Henry	74	21	Mount Weather	7	17	3.55	+0.25	Mendota	7.33	Langley Field	1.57
Washington	34.6	+4.4	Quilcene	69	16	Snyders Ranch	−18	30	6.96	+2.18	Wind River	31.88	Wahluke	0.18
West Virginia	35.2	+3.0	2 stations	68	[2] 7	Cheat Bridge	−2	17	4.46	+0.64	Parsons	7.60	Upper Tract	1.13
Wisconsin	18.2	+4.3	Sheboygan	47	18	3 stations	−27	[2] 6	1.38	+0.11	Port Washington	2.65	Mondovi	0.47
Wyoming	25.5	+5.8	Echeta	67	17	2 stations	−23	[2] 13	0.73	−0.13	Dutch Joe	4.73	4 stations	0.00
Porto Rico [3]	74.0	−0.6	San German	94	4	Jayuya	51	30	8.83	+4.21	Comerio Falls	21.40	Portola	0.15

[1] For description of tables and charts, see REVIEW, July, 1922, pp. 384-385. [2] Other dates also. [3] Late report, December, 1922.

TABLE I.—*Climatological data for Weather Bureau stations, January, 1923.*

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.													Precipitation.			Wind.										
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max.+mean min.÷2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity.	Total.	Departure from normal.	Days with 0.01 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.							22.2	−2.1										76	5.59	+2.1										6.6		
Eastport	76	67	85	29.89	29.98	−.02	17.2	−3.2	46	1	25	−6	7	10	35	16	12	76	4.95	+1.1	16	13,031	nw.	58	ne.	8	10	6	15	6.3	36.0	11.8
Greenville, Me.	1,070	6	.....	28.81	30.04	.....	8.7	.....	42	1	18	−21	18	−1	44	.....	.....	.....	4.58	.....	15	.....	nw.	.....	.....	.....	10	6	15	.....	40.4	29.0
Portland, Me.	103	82	117	29.92	30.05	.00	19.3	−3.1	46	1	27	−3	7	12	38	17	13	75	8.55	+4.7	17	8,156	nw.	38	nw.	25	8	7	16	6.4	52.7	37.7
Concord	288	70	79	29.71	30.04	−.01	19.6	−2.0	49	1	28	−9	24	11	43	.....	.....	.....	3.78	+0.4	14	4,399	nw.	31	nw.	25	11	7	13	5.8	33.2	30.0
Burlington	404	11	48	29.62	30.10	+.05	12.6	−3.7	42	1	22	−19	7	3	42	.....	.....	.....	2.42	+0.6	13	8,508	n.	68	s.	18	7	6	18	7.2	22.9	8.5
Northfield	876	12	60	29.09	30.09	+.04	10.7	−4.4	46	21	23	−25	7	−2	52	10	8	86	3.41	+0.9	13	5,479	n.	40	s.	18	6	6	19	7.2	32.5	21.6
Boston	125	115	188	29.89	30.03	−.02	27.0	−0.9	55	1	34	5	18	20	37	24	18	70	6.07	+2.2	16	8,596	nw.	42	ne.	8	8	5	18	6.7	28.0	7.6
Nantucket	12	14	90	29.99	30.00	−.04	31.4	−0.7	52	1	37	13	30	26	22	29	25	81	4.75	+1.3	16	13,948	nw.	63	ne.	4	8	3	20	7.0	9.9	T.
Block Island	26	11	46	29.99	30.02	−.05	29.7	−1.3	53	1	36	13	30	23	28	28	25	80	5.43	+1.6	14	17,716	nw.	58	nw.	13	6	7	18	6.8	11.9	1.0
Providence	160	215	251	29.85	30.04	−.02	25.8	−1.4	52	1	33	5	18	18	36	23	18	72	6.55	+2.2	16	11,071	nw.	54	nw.	25	8	10	13	6.2	25.4	4.0
Hartford	159	122	140	29.88	30.06	−.01	24.6	−0.9	53	1	32	−1	18	17	39	22	17	74	7.77	+3.9	17	5,671	nw.	39	nw.	1	8	3	20	7.1	40.1	17.4
New Haven	106	74	153	29.94	30.07	−.01	26.5	−1.7	53	1	34	3	18	20	36	24	19	73	7.80	+3.9	14	7,782	ne.	34	n.	13	9	6	16	6.3	31.2	8.5
Middle Atlantic States.							33.6	+1.7										74	3.84	+0.6										7.0		
Albany	97	102	115	29.99	30.10	+.03	19.6	−3.5	46	1	28	−6	31	12	36	18	15	82	4.65	+2.1	16	6,033	nw.	42	s.	18	8	5	18	7.0	34.6	13.6
Binghamton	871	10	84	29.08	30.04	−.04	23.1	0.0	44	1	31	−11	31	15	42	.....	.....	.....	3.48	+1.5	18	4,922	nw.	24	nw.	16	3	4	24	8.5	28.1	8.0
New York	314	414	454	29.71	30.07	−.03	31.0	+0.1	53	1	38	10	18	24	30	28	22	69	5.97	+2.2	15	14,756	nw.	70	nw.	13	5	10	16	6.9	21.8	1.5
Harrisburg	374	94	104	29.69	30.11	+.01	31.2	+2.5	47	1	37	13	17	26	24	28	23	73	3.14	+0.3	12	5,799	w.	30	nw.	28	5	4	22	7.5	9.3	3.0
Philadelphia	117	123	190	29.97	30.10	−.01	34.4	+1.8	59	21	40	14	18	28	28	31	25	68	4.78	+1.4	12	8,391	nw.	34	nw.	1	4	9	18	7.3	4.1	1.5
Reading	325	81	98	29.72	30.09	.....	31.1	.....	52	1	37	12	31	26	27	29	25	76	3.52	0.0	15	5,333	nw.	36	nw.	25	5	7	19	7.5	14.1	1.8
Scranton	805	111	119	29.19	30.09	.00	26.8	+1.3	49	1	33	0	31	20	30	25	22	81	4.24	+1.4	17	5,263	nw.	31	w.	12	4	5	22	8.1	23.4	7.5
Atlantic City	52	37	172	30.02	30.08	−.03	35.6	+3.1	53	1	42	15	17	29	25	33	29	77	4.08	+0.7	11	14,792	nw.	72	se.	24	6	12	13	6.2	4.1	T.
Cape May	18	13	49	30.10	30.12	.00	35.6	+1.5	55	21	41	16	18	30	25	33	30	79	3.44	+0.1	11	7,480	nw.	41	s.	1	7	5	19	6.9	1.1	0.0
Sandy Hook	22	10	55	30.04	30.06	.....	31.4	.....	54	21	36	15	18	26	25	29	24	73	5.44	.....	14	13,583	nw.	50	ne.	8	6	7	18	6.7	10.9	1.0
Trenton	190	159	183	29.86	30.08	.....	31.0	.....	56	21	38	11	17	25	31	28	23	73	4.13	+1.0	12	9,264	nw.	44	nw.	1	5	7	19	7.2	12.8	1.5
Baltimore	123	100	113	29.97	30.10	−.02	36.6	+2.8	64	21	43	20	17	30	25	32	27	69	4.14	+0.9	13	4,732	nw.	21	w.	16	4	13	14	7.0	6.0	0.0
Washington	112	62	85	29.98	30.11	−.02	36.8	+3.4	65	21	43	19	17	30	25	32	26	68	4.24	+0.9	12	6,052	nw.	35	nw.	12	5	8	18	7.1	3.1	0.0
Lynchburg	681	153	188	29.35	30.12	−.01	39.8	+2.3	65	21	49	19	11	31	34	34	28	67	2.25	−1.5	12	6,448	nw.	37	sw.	14	7	10	14	6.4	2.7	0.0
Norfolk	91	170	205	30.02	30.12	−.01	43.9	+3.3	72	21	52	23	17	36	28	39	33	72	1.74	−1.6	9	11,226	ne.	48	w.	16	11	7	13	5.9	T.	0.0
Richmond	144	11	52	29.96	30.12	−.01	40.1	+2.1	68	21	49	21	11	31	30	35	31	75	4.61	+1.6	13	5,856	ne.	37	sw.	14	9	9	13	6.2	0.5	0.0
Wytheville	2,304	49	55	27.68	30.13	−.01	36.4	+3.4	60	21	44	17	17	29	28	32	27	75	3.07	−1.2	16	5,728	w.	29	nw.	15	10	8	13	5.8	6.0	0.0
South Atlantic States.							50.0	+4.0										75	2.74	−0.9										5.1		
Asheville	2,255	70	84	27.73	30.15	.00	41.8	+6.4	63	31	51	21	17	33	31	36	29	68	2.03	−0.8	11	7,772	nw.	34	nw.	9	6	14	11	6.1	1.0	0.0
Charlotte	779	55	62	29.28	30.14	−.01	44.6	+3.4	67	21	53	26	24	36	30	38	33	70	3.67	−0.6	12	4,647	sw.	30	w.	12	8	11	12	5.9	0.0	0.0
Hatteras	11	12	11	30.10	30.11	−.03	48.4	+1.3	66	21	54	30	18	42	25	45	42	82	4.04	−0.9	10	11,302	ne.	44	n.	22	10	11	10	5.3	0.0	0.0
Manteo	12	5	42	.....	.....	.....	45.4	.....	69	21	.....	28	14	.....	28	.....	.....	.....	4.62	.....	4	.....	sw.	.....	.....	.....	17	6	8	.....	0.0	0.0
Raleigh	376	103	110	29.72	30.14	+.01	44.0	+3.6	71	21	52	24	11	35	36	40	36	78	3.11	−0.4	10	6,954	sw.	56	s.	1	7	11	13	6.3	0.0	0.0
Wilmington	78	81	91	30.07	30.16	+.02	50.2	+3.7	74	22	59	30	18	41	34	45	41	78	3.22	−0.3	8	5,910	w.	32	ne.	22	17	7	7	4.2	0.0	0.0
Charleston	48	11	92	30.10	30.15	.00	53.7	+3.8	76	22	62	38	18	46	27	48	44	79	2.21	−1.2	7	7,779	w.	44	ne.	22	11	13	7	4.7	0.0	0.0
Columbia, S. C.	351	41	57	29.77	30.16	+.01	50.6	+5.5	74	21	60	31	23	41	31	43	37	69	2.54	−0.8	6	5,850	s.	28	ne.	22	14	10	7	4.5	0.0	0.0
Due West	711	10	55	29.38	30.17	.....	47.0	.....	71	22	57	29	23	37	32	.....	.....	.....	3.12	.....	9	6,868	sw.	34	nw.	9	11	9	11	5.3	T.	0.0
Greenville, S. C.	1,039	113	122	29.01	30.12	.....	45.6	.....	67	28	54	27	23	37	28	39	33	71	2.68	.....	10	6,567	ne.	42	nw.	16	11	7	13	5.5	0.0	0.0
Augusta	180	62	77	29.95	30.15	−.01	51.4	+4.4	75	22	62	31	11	40	33	45	41	77	2.72	−1.4	7	4,379	nw.	27	nw.	9	11	12	8	4.9	0.0	0.0
Savannah	65	150	194	30.09	30.16	+.01	55.6	+4.2	80	22	65	36	4	46	30	48	44	76	2.45	−0.7	5	9,649	s.	44	nw.	9	17	8	6	4.2	0.0	0.0
Jacksonville	43	209	245	30.12	30.17	+.02	59.2	+3.8	79	22	68	38	4	51	25	52	49	78	1.37	−1.8	7	8,716	sw.	39	sw.	1	17	7	7	4.0	0.0	0.0
Florida peninsula.							67.4	+1.8										79	0.49	−2.2										3.6		
Key West	22	10	64	30.10	30.12	+.02	70.5	+1.0	81	8	76	57	11	65	14	65	64	86	0.35	−1.6	5	6,927	ne.	37	w.	9	20	10	1	2.9	0.0	0.0
Miami	25	71	79	30.13	30.16	.....	68.8	+1.5	80	9	75	43	17	62	25	62	59	76	0.21	−3.2	5	6,011	e.	25	n.	16	12	17	2	4.1	0.0	0.0
Sand Key	23	39	72	30.12	30.15	+.05	70.8	.....	78	7	74	60	16	68	11	65	62	75	0.27	.....	4	11,193	ne.	43	ne.	16	19	11	1	3.2	0.0	0.0
Tampa	35	79	92	30.13	30.17	+.05	63.0	+2.9	81	31	71	43	11	55	25	56	53	78	0.90	−1.9	4	3,936	e.	21	nw.	9	16	9	6	4.3	0.0	0.0
East Gulf States.							54.6	+6.7										77	3.48	−1.5										4.9		
Atlanta	1,174	190	216	28.89	30.15	.00	48.2	+5.6	69	27	57	29	4	40	25	44	40	78	1.94	−3.4	11	9,680	nw.	48	nw.	9	14	5	12	5.1	0.1	0.0
Macon	370	78	87	29.76	30.16	.00	51.4	+5.8	73	21	62	30	5	40	33	44	39	71	3.71	−1.5	9	4,788	nw.	25	ne.	23	12	7	12	5.0	0.0	0.0
Thomasville	273	49	58	29.87	30.17	+.01	56.8	+5.8	78	30	67	33	26	46	30	50	46	77	3.94	−0.2	7	3,441	sw.	21	w.	9	10	15	6	4.7	0.0	0.0
Apalachicola	36	42	49	30.13	30.18	.....	57.6	.....	74	28	64	40	4	51	23	54	51	83	3.80	.....	6	4,932	se.	27	nw.	9	19	6	6	3.8	0.0	0.0
Pensacola	56	149	185	30.10	30.16	+.02	58.8	+6.3	72	12	65	37	4	53	22	55	52	82	3.07	−1.0	6	9,378	s.	45	s.	23	11	10	10	5.0	0.0	0.0
Anniston	741	9	57	29.36	30.18	+.02	49.4	+7.2	74	27	60	27	4	39	34	.....	.....	.....	2.84	−2.5	8	4,914	nw.	36	e.	23	10	12	9	5.3	0.0	0.0
Birmingham	700	11	48	29.39	30.17	+.01	51.8	+6.5	73	27	61	28	4	43	29	45	39	69	3.82	−1.5	10	6,174	s.	29	e.	23	14	7	10	4.8	0.0	0.0
Mobile	57	125	161	30.09	30.15	.00	58.4	+6.2	76	12	66	38	4	50	26	53	50	81	2.65	−2.2	6	7,037	se.	32	n.	15	10	15	6	5.2	0.0	0.0
Montgomery	223	100	112	29.92	30.18	+.02	54.6	+6.4	77	27	64	34	4	45	29	48	43	71	3.54	−1.6	8	5,208	s.	27	e.	23	11	12	8	4.5	0.0	0.0
Corinth	469	6	.....	.....	.....	.....	48.4	.....	68	7	58	28	25	39	34	.....	.....	.....	5.16	.....	12	.....	s.	.....	.....	.....	5	14	12	.....	0.0	0.0
Meridian	375	85	93	29.74	30.15	−.01	54.2	+9.2	75	30	64	29	4	44	32	48	43	75	2.77	−2.8	8	4,518	sw.	26	ne.	22	12	8	11	5.2	0.0	0.0
Vicksburg	247	65	73	29.87	30.16	+.01	56.2	+8.0	76	7	65	35	25	48	27	51	48	81	4.76	−0.9	11	5,883	s.	30	w.	14	10	8	13	5.5	0.0	0.0
New Orleans	53	76	84	30.10	30.16	+.03	61.0	+6.8	79	31	69	40	25	53	24	54	51	78	5.26	+0.6	8	4,778	s.	26	w.	2	14	7	10	4.8	0.0	0.0
West Gulf States.							56.7	+10.2										74	3.48	+0.5										5.0		
Shreveport	249	77	93	29.84	30.12	−.02	55.9	+9.7	75	30	65	34	23	46	30	50	45	74	4.32	−0.1	8	5,938	s.	30	ne.	22	14	3	14	5.3	0.0	0.0
Bentonville	1,303	11	44	.....	.....	.....	45.4	+11.3	67	11	56	23	3	35	30	.....	.....	.....	5.49	.....	8	.....	.....	.....	.....	.....	14	6	11	.....	T.	0.0
Fort Smith	457	79	94	29.59	30.08	−.06	48.8	+10.5	70	18	59	29	6	39	33	42	35	67	3.62	+1.1	11	6,370	e.	38	sw.	5	11	8	12	5.5	T.	0.0
Little Rock	357	136	144	29.70	30.09	−.06	49.7	+8.3	68	10	59	31	23	41	34	45	40	75	7.42	+2.6	10	7,191	s.	44	s.	5	11	6	14	5.7	0.0	0.0
Brownsville	57	4	26	30.01	30.07	.....	67.6	.....	85	7	76	42	23	59	25	61	59	80	0.13	.....	7	7,257	s.	33	s.	26	14	12	5	4.1	0.0	0.0
Corpus Christi	20	11	73	30.07	30.09	−.01	65.0	+11.5	84	7	72	40	4	58	29	59	56	81	0.40	−1.8	4	9,920	s.	36	n.	22	9	13	9	5.4	0.0	0.0
Dallas	512	109	117	29.52	30.08	.....	55.4	.....	80	18	66	31	3	57	37	.....	.....	.....	4.04	.....	9	6,849	s.	37	ne.	21	14	5	12	5.1	0.3	0.0
Fort Worth	670	106	114	29.34	30.06	−.06	55.5	+11.2	80	18	66	30	23	44	35	47	40	63	4.60	+3.7	6	7,433	s.	35	s.	20	15	5	11	4.8	1.0	0.0
Galveston	54	106	114	30.07	30.13	.00	62.0	+8.2	73	7	67	40	23	45	26	58	56	84	6.99	+3.4	5	8,645	se.	36	nw.	22	14	8	9	4.7	0.0	0.0
Groesbeck	461	11	56	29.58	30.07	.....	57.0	.....	78	20	68	29	3	46	38	.....	.....	.....	1.74	.....	9	9,241	s.	41	sw.	18	13	7	11	5.0	0.0	0.0
Houston	138	111	121	29.96	30.11	.....	62.1	+9.2	79	12	71	37	24	53	30	.....	.....	.....	1.31	.....	7	6,756	s.	38	se.	22	10	12	9	4.7	0.0	0.0
Palestine	510	64	72	29.56	30.10	−.02	58.1	+9.9	79	8	68	33	23	48	33	51	44	67	3.12	−0.8	7	6,890	s.	30	ne.	22	10	9	12	5.5	0.0	0.0
Port Arthur	34	58	66	30.07	30.11	.....	60.6	.....	75	7	68	38	24	54	26	56	53	85	3.20	.....	8	7,073	se.	28	n.	22	14	7	10	4.4	0.0	0.0
San Antonio	701	119	132	29.34	30.08	−.02	62.0	+10.9	86	7	73	38	23	51	36	53	45	62	0.46	−1.2	6	6,150	s.	32	n.	21	15	6	10	4.2	0.0	0.0
Taylor	582	55	63	29.48	30.10	−.01	59.0	+11.5	84	8	70	34	3	47	40	.....	.....	.....	0.37	−2.4	4	7,350	s.	33	s.	20	11	9	11	5.0	0.0	0.0

TABLE I.—*Climatological data for Weather Bureau stations, January, 1923*—Continued.

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.													Precipitation.			Wind.										
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max.+mean min.÷2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity.	Total.	Departure from normal.	Days with 0.01 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.
Ohio Valley and Tennessee.							39.2	+5.9										76	4.75	+0.9										7.6		
Chattanooga	762	189	213	29.33	30.16	.00	46.6	+5.4	65	21	55	28	4	38	30	41	35	67	4.81	−0.8	15	6,621	se.	35	nw.	16	8	11	12	6.1	0.0	0.0
Knoxville	996	102	111	29.14	30.14	−.01	44.0	+5.2	63	11	52	25	17	36	34	40	34	73	5.73	+0.8	14	5,444	sw.	40	sw.	18	3	8	20	7.6	0.0	0.0
Memphis	399	76	97	29.68	30.11	−.05	49.2	+8.3	66	21	57	31	3	42	26	44	38	69	5.05	−0.2	11	7,196	s.	37	sw.	11	9	7	15	6.3	0.0	0.0
Nashville	546	168	191	29.55	30.14	−.02	45.0	+6.4	68	11	54	27	4	36	35	40	34	70	5.89	+1.0	14	8,675	s.	38	nw.	9	6	6	19	7.0	T.	0.0
Lexington	989	193	230	29.03	30.12	−.01	39.1	+6.1	59	11	47	17	17	31	28	.....	.....	.....	6.63	+2.8	13	12,119	sw.	55	sw.	18	6	6	19	7.2	T.	0.0
Louisville	525	219	255	29.53	30.13	−.01	40.4	+6.0	59	11	48	20	17	33	27	35	30	71	5.65	+1.8	12	9,977	w.	42	s.	14	6	7	18	7.3	T.	0.0
Evansville	431	139	175	29.63	30.12	−.02	40.8	+8.5	63	18	48	25	17	34	24	36	32	74	5.43	+1.7	11	9,389	nw.	42	sw.	18	3	10	18	7.2	T.	0.0
Indianapolis	822	194	230	29.18	30.09	−.03	34.6	+6.2	56	18	41	19	17	28	27	31	28	80	2.73	−0.1	16	10,407	w.	42	w.	15	4	5	22	8.0	0.6	0.0
Royal Center	736	11	55	29.24	30.07	.....	29.6	.....	48	18	36	6	10	23	28	.....	.....	.....	1.92	.....	15	9,144	w.	35	s.	17	5	6	20	7.6	11.5	0.0
Terre Haute	575	96	129	29.45	30.08	.....	36.2	.....	58	18	43	22	17	29	28	33	30	83	1.86	.....	9	8,080	nw.	39	nw.	14	4	7	20	7.5	0.1	0.0
Cincinnati	628	11	51	29.40	30.10	−.02	36.5	+6.2	58	18	44	15	17	29	32	.....	31	80	4.64	+1.3	13	7,047	w.	34	sw.	18	7	4	20	7.5	T.	0.0
Columbus	824	179	222	29.19	30.09	−.02	33.8	+5.2	54	18	40	11	17	27	25	30	27	77	3.46	+0.5	15	9,695	nw.	36	s.	18	3	7	21	8.0	0.9	0.0
Dayton	899	181	216	29.10	30.09	.....	34.5	+5.6	56	18	41	13	17	28	28	31	28	80	3.83	+0.8	17	9,213	nw.	39	nw.	15	4	9	18	7.5	0.2	0.0
Elkins	1,947	59	67	27.98	30.11	−.01	34.0	+5.0	59	21	43	6	11	25	42	31	27	79	5.06	+1.7	24	5,386	w.	32	w.	11	1	6	24	8.6	7.1	0.0
Parkersburg	638	77	84	29.44	30.12	.00	37.0	+5.7	60	18	45	12	17	29	33	33	29	75	4.14	+1.0	15	5,366	sw.	32	nw.	14	3	4	24	8.3	0.2	0.0
Pittsburgh	842	353	410	29.15	30.08	−.03	33.4	+2.7	55	18	40	11	17	27	32	31	27	79	3.49	+0.6	15	9,625	w.	43	nw.	16	1	3	27	9.1	2.9	0.0
Lower Lake Region.							25.3	+0.8										80	2.72	+0.1										8.4		
Buffalo	767	247	280	29.19	30.05	−.02	25.4	+0.8	44	18	32	−2	17	19	27	23	20	83	3.27	0.0	20	13,147	w.	60	sw.	18	3	3	25	8.4	22.6	5.0
Canton	448	10	61	29.56	30.07	.....	10.8	−5.5	44	20	20	−20	30	1	42	.....	.....	.....	2.86	−0.3	17	7,899	e.	47	w.	19	9	4	18	6.5	21.4	6.6
Oswego	335	76	91	.....	30.07	.00	20.3	−3.6	41	21	28	−5	17	13	35	.....	.....	.....	2.22	−0.9	23	9,264	s.	33	s.	18	2	3	26	....	31.8	12.3
Rochester	523	86	102	29.48	30.08	+.01	24.0	−0.6	47	18	31	0	17	17	32	22	18	77	3.55	+0.4	21	6,910	w.	37	w.	18	2	3	26	8.8	38.5	15.0
Syracuse	597	97	113	29.40	30.08	+.01	21.2	−1.8	46	21	29	−5	17	14	33	.....	.....	.....	3.78	+1.6	22	8,377	nw.	51	s.	18	2	3	26	8.7	36.0	9.0
Erie	714	130	166	29.25	30.05	−.03	28.7	+1.9	49	18	35	7	17	23	25	27	23	78	2.67	−0.4	15	12,339	nw.	53	se.	18	1	3	27	9.2	17.5	2.0
Cleveland	762	190	201	29.22	30.07	−.02	30.2	+3.7	52	18	36	11	17	25	25	28	24	79	2.61	+0.2	16	11,715	w.	44	s.	17	1	4	26	9.1	6.9	0.0
Sandusky	629	62	103	29.36	30.06	−.03	30.5	+4.2	53	18	36	6	17	25	25	.....	.....	.....	2.50	+0.4	13	7,188	w.	35	nw.	16	1	8	22	8.6	8.0	0.0
Toledo	628	208	243	29.37	30.08	−.01	29.7	+3.9	51	18	36	3	17	24	26	28	24	79	1.75	−0.2	12	10,652	w.	43	nw.	18	4	3	24	8.3	9.5	0.0
Fort Wayne	856	113	124	29.12	30.08	.....	30.1	+3.2	50	18	36	11	17	25	27	28	24	80	1.99	.....	15	7,900	w.	38	sw.	18	2	8	21	8.0	12.0	0.0
Detroit	730	218	258	29.25	30.07	−.01	27.0	+2.6	45	18	33	1	17	21	27	26	22	81	1.94	0.0	17	8,979	nw.	40	sw.	18	2	7	22	8.1	15.6	0.3
Upper Lake Region.							21.0	+2.7										84	1.66	−0.4										8.0		
Alpena	609	13	92	29.38	30.07	+.03	19.2	+0.1	43	18	27	−6	30	11	32	18	16	86	1.72	−0.5	17	9,491	nw.	50	nw.	18	1	14	16	7.8	19.9	7.0
Escanaba	612	54	60	29.38	30.08	+.03	17.8	+3.3	42	18	25	−7	23	11	34	17	14	86	1.98	+0.4	14	6,779	nw.	40	nw.	18	5	7	19	7.4	23.2	8.0
Grand Haven	632	54	89	29.34	30.05	−.02	25.8	+1.5	42	18	31	6	17	20	32	25	23	88	1.57	−1.2	15	9,597	e.	43	w.	12	1	2	28	9.0	11.0	0.4
Grand Rapids	707	70	87	29.27	30.06	.00	26.2	+2.4	44	20	32	3	17	21	33	24	21	78	1.25	−1.5	14	5,503	w.	30	w.	18	1	7	23	8.4	13.1	0.8
Houghton	684	62	99	29.29	30.05	.00	16.6	+2.1	39	18	24	−10	20	9	38	.....	.....	.....	2.07	0.0	17	6,913	e.	58	w.	18	1	4	26	9.2	22.2	17.0
Lansing	878	11	62	29.07	30.05	.....	23.6	+1.6	43	18	31	−5	17	16	36	23	21	86	1.65	−0.4	20	5,330	nw.	27	nw.	14	1	8	22	8.4	16.3	3.0
Ludington	637	60	66	29.33	30.05	.....	24.1	.....	41	18	30	3	6	18	32	23	20	85	1.95	.....	19	8,266	se.	39	w.	18	3	6	22	8.1	21.3	3.0
Marquette	734	77	111	29.26	30.10	+.06	19.2	+3.3	41	18	25	4	20	13	31	17	15	87	2.84	+0.8	21	7,485	w.	42	w.	18	1	9	21	8.4	28.3	14.2
Port Huron	638	70	120	29.33	30.05	−.01	24.1	+1.8	43	18	30	1	17	18	25	23	21	85	1.54	−0.4	14	9,249	nw.	43	nw.	18	1	8	22	8.3	19.8	4.8
Saginaw	641	69	77	29.34	30.06	.....	22.4	.....	42	18	29	−5	17	16	35	22	19	84	0.91	−1.4	16	6,635	nw.	29	sw.	18	0	6	25	8.9	10.6	2.5
Sault Sainte Marie	614	11	52	29.37	30.11	+.08	11.2	−2.1	37	18	20	−19	17	3	38	10	8	87	1.64	−0.5	18	5,916	e.	51	nw.	18	3	8	20	7.8	18.0	15.3
Chicago	823	140	310	29.14	30.06	−.04	30.8	+5.7	49	18	37	11	10	25	23	28	23	70	0.92	−1.1	15	9,140	w.	42	s.	17	5	9	17	7.2	4.4	0.0
Green Bay	617	109	144	29.36	30.05	−.01	19.4	+4.8	42	18	26	−2	17	12	37	18	15	82	1.73	0.0	12	7,765	w.	48	w.	18	4	7	20	7.8	20.1	4.0
Milwaukee	681	125	139	29.29	30.05	−.03	25.8	+5.2	44	18	32	8	10	20	29	24	20	76	1.78	−0.2	15	8,258	w.	40	e.	27	4	6	21	7.6	18.6	0.5
Duluth	1,133	11	47	28.78	30.07	−.02	13.0	+5.1	39	18	21	−17	19	5	49	12	11	93	1.60	+0.6	12	9,655	nw.	70	nw.	18	11	6	14	6.0	22.2	16.0
North Dakota.							10.4	+5.9										87	0.44	−0.2										6.8		
Moorhead	940	50	58	29.00	30.08	−.06	11.0	+7.2	41	17	20	−19	5	2	38	9	7	88	0.47	−0.2	13	6,102	nw.	40	nw.	18	8	5	18	7.0	6.0	4.9
Bismarck	1,674	8	57	28.20	30.09	−.04	12.3	+4.5	44	17	24	−20	31	1	37	11	9	88	0.29	−0.2	6	5,883	nw.	39	nw.	8	5	7	19	7.1	4.1	6.5
Devils Lake	1,482	11	44	28.39	30.06	−.06	6.0	+5.7	41	17	16	−21	5	−4	30	5	3	87	0.42	−0.2	7	7,003	se.	50	nw.	17	9	10	12	6.0	6.5	6.1
Ellendale	1,457	10	56	28.44	30.07	.....	13.5	.....	43	17	23	−11	5	4	38	.....	.....	.....	0.59	.....	9	10,187	nw.	54	nw.	8	5	9	17	7.3	7.8	4.0
Grand Forks	835	12	89	.....	.....	.....	6.7	.....	47	17	18	−26	5	−4	55	.....	.....	.....	0.28	.....	7	.....	n.	50	nw.	18	16	5	10	....	2.8	6.7
Williston	1,878	41	48	27.94	30.00	−.11	12.5	+6.1	49	17	23	−18	31	2	41	12	9	84	0.56	0.0	9	5,354	se.	34	nw.	17	7	6	18	6.9	7.4	3.6
Upper Mississippi Valley.							29.0	+7.8										79	1.47	−0.2										7.1		
Minneapolis	918	102	208	29.02	30.05	.....	18.0	.....	44	18	26	−5	5	10	41	.....	.....	.....	1.01	+0.3	12	8,484	se.	46	n.	18	3	10	18	7.5	11.8	6.2
St. Paul	837	236	261	29.11	30.06	−.05	17.6	+5.0	43	18	26	−3	5	10	41	.....	.....	.....	1.12	+0.2	13	8,709	se.	45	nw.	18	2	12	17	7.3	12.9	6.5
La Crosse	714	11	48	29.25	30.05	−.06	21.6	+5.5	43	18	30	4	21	14	34	.....	.....	.....	0.75	−0.3	10	3,683	se.	24	s.	17	4	5	22	7.7	9.4	2.5
Madison	974	70	78	28.98	30.08	−.02	22.0	+5.3	42	18	29	2	29	15	33	21	19	88	1.25	−0.3	11	7,147	nw.	31	nw.	18	5	7	19	7.4	11.0	2.9
Wausau	1,247	4	....	28.66	30.06	.....	16.8	.....	40	18	24	−8	25	9	39	.....	.....	.....	1.29	.....	13	.....	se.	....	.....	....	8	3	20	7.5	14.2	3.4
Charles City	1,015	10	49	28.94	30.07	−.07	21.9	+10.5	42	17	30	−3	6	14	34	20	18	88	0.89	−0.1	11	5,317	se.	26	se.	11	8	4	19	7.0	7.5	1.0
Davenport	606	71	79	29.38	30.07	−.05	29.2	+7.4	50	18	36	14	12	22	30	26	24	80	0.97	−0.6	12	5,952	e.	26	nw.	18	5	8	18	7.2	8.0	T.
Des Moines	861	84	97	29.11	30.05	−.09	29.3	+9.2	55	18	37	2	6	22	31	27	23	76	0.88	−0.3	10	5,375	nw.	26	sw.	17	7	5	19	6.8	7.8	T.
Dubuque	698	81	96	29.30	30.09	−.03	25.8	+6.7	46	18	33	11	12	19	32	24	20	79	0.63	−0.9	10	5,149	nw.	28	nw.	18	8	6	17	6.7	4.5	0.5
Keokuk	614	64	78	29.38	30.08	−.06	33.9	+9.0	56	18	41	12	6	26	27	30	25	74	1.13	−0.6	7	6,144	nw.	30	nw.	14	5	7	19	7.0	7.3	0.0
Cairo	358	87	93	29.71	30.10	−.06	43.4	+8.5	65	18	51	28	1	36	26	38	32	70	7.01	+3.2	9	7,706	s.	35	sw.	18	5	5	21	7.4	0.0	0.0
Peoria	609	11	45	29.39	30.08	−.04	31.8	+8.7	50	18	38	15	22	25	24	29	26	83	1.10	−1.1	11	5,817	se.	27	nw.	9	6	9	16	7.0	5.4	0.0
Springfield, Ill.	644	10	91	29.36	30.06	−.07	34.6	+8.1	54	18	40	20	22	29	24	31	28	79	1.06	−1.2	9	7,277	w.	29	s.	17	5	8	18	7.3	3.8	0.0
Hannibal	534	74	109	29.47	30.06	−.07	36.5	+9.4	58	18	44	16	6	29	26	.....	.....	.....	0.75	−1.4	8	6,795	nw.	30	s.	17	6	9	16	6.5	2.4	0.0
St. Louis	567	265	303	29.45	30.07	−.07	39.5	+8.7	62	18	46	24	6	33	25	36	30	71	2.08	−0.2	8	10,710	s.	44	s.	17	5	11	15	6.7	0.0	0.0
Missouri Valley.							33.0	+11.1										71	0.79	−0.2										5.9		
Columbia, Mo.	781	11	84	29.20	30.06	−.07	38.9	+11.7	60	17	48	20	6	30	32	.....	.....	.....	1.40	−0.8	5	7,027	w.	28	nw.	9	9	5	17	6.5	T.	0.0
Kansas City	963	161	181	29.00	30.06	−.09	39.0	+12.8	63	17	48	19	6	30	30	33	27	66	0.16	−1.0	3	8,656	nw.	43	nw.	7	12	9	10	5.3	T.	0.0
St. Joseph	967	11	49	28.98	30.05	.....	36.6	.....	62	17	45	18	5	28	30	31	26	70	0.26	.....	5	6,618	nw.	36	nw.	7	10	10	11	5.5	0.6	0.0
Springfield, Mo.	1,324	98	104	28.64	30.07	−.07	42.7	+11.4	64	8	51	21	3	34	30	37	31	71	3.43	+0.8	6	8,353	se.	40	w.	8	14	4	13	5.3	0.0	0.0
Iola	984	11	50	28.99	30.06	−.08	40.6	+13.0	68	8	52	18	3	29	38	.....	.....	.....	1.16	+0.2	5	5,374	s.	33	nw.	7	6	11	14	6.4	0.0	0.0
Topeka	987	92	107	.....	.....	.....	38.6	+13.0	68	13	49	18	3	28	33	.....	.....	.....	0.07	−0.9	3	7,817	nw.	40	nw.	7	13	6	12	5.3	0.0	0.0
Drexel	1,299	10	54	28.61	30.03	.....	29.6	.....	53	18	39	7	2	20	33	.....	.....	.....	0.90	.....	5	7,665	nw.	30	sw.	17	6	9	16	6.9	7.7	T.
Lincoln	1,189	11	84	28.75	30.06	−.09	33.6	+12.4	58	18	43	14	3	24	32	28	22	70	0.14	−0.5	4	7,483	n.	42	nw.	8	6	12	13	6.2	1.2	T.
Omaha	1,105	115	122	28.84	30.06	−.09	32.5	+10.6	56	17	40	12	6	24	32	28	22	71	0.87	+0.2	5	6,199	nw.	28	nw.	18	9	7	15	6.0	7.6	0.2
Valentine	2,598	47	54	27.24	30.04	−.08	28.6	+9.7	63	17	39	−1	30	18	38	24	18	68	0.49	0.0	6	6,990	w.	43	w.	17	8	15	8	4.9	7.1	0.0
Sioux City	1,135	94	164	28.80	30.06	−.09	27.7	+9.9	57	18	36	6	28	20	34	24	19	73	0.81	+0.3	6	9,128	nw.	44	nw.	13	9	7	15	6.3	7.9	0.6
Huron	1,306	59	74	28.63	30.09	−.07	21.4	+10.1	58	17	31	−11	28	11	41	18	14	78	0.28	−0.2	7	7,110	nw.	36	se.	23	12	7	12	5.5	6.3	1.8
Pierre	1,572	70	75	28.33	30.06	−.07	24.9	+8.9	57	17	33	−1	30	16	32	22	17	75	0.14	−0.3	5	5,930	nw.	33	nw.	17	8	9	14	6.1	1.3	0.0
Yankton	1,233	49	57	28.69	30.08	−.10	27.2	+9.8	63	17	36	0	28	18	41	.....	.....	.....	0.48	−0.1	5	6,081	nw.	33	nw.	18	6	11	14	6.4	5.7	1.3

TABLE I.—*Climatological data for Weather Bureau stations, January, 1923*—Continued.

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.													Precipitation.			Wind.										
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max.+mean min.÷2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity.	Total.	Departure from normal.	Days with 0.01 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.							**27.0**	**+7.8**										**67**	**0.61**	**−0.3**										**5.8**		
Billings	3,140	5	.....	.....	.....	.....	30.6	.....	60	10	42	−14	30	19	38	.....	.....	.....	0.11	.....	3	.....	nw.	.....	.....	.....	17	7	7	.....	1.5	.....
Havre	2,505	11	44	27.25	29.98	−.12	19.4	+6.5	49	10	29	−22	30	10	36	17	15	85	1.12	+0.4	10	5,357	sw.	40	sw.	17	10	5	16	6.1	8.9	2.9
Helena	4,110	87	112	25.69	29.99	−.16	27.8	+7.6	56	10	36	−12	29	20	28	24	18	66	0.44	−0.5	7	6,655	sw.	50	sw.	6	5	9	17	7.2	1.9	1.3
Kalispell	2,973	48	56	26.83	29.96	−.16	27.4	+7.8	48	10	33	−10	30	21	22	26	22	77	1.07	−0.5	16	3,801	nw.	34	sw.	17	1	10	20	7.9	3.6	2.6
Miles City	2,371	48	55	27.41	30.04	−.08	25.5	+11.0	59	17	35	−15	36	16	30	22	17	72	0.41	−0.2	7	3,586	s.	36	w.	17	6	11	14	5.8	3.2	1.2
Rapid City	3,259	50	58	26.52	30.04	−.06	29.6	+8.1	62	17	41	0	30	18	41	25	17	59	0.37	−0.1	5	6,481	w.	42	n.	17	8	13	10	5.6	3.9	0.1
Cheyenne	6,088	84	101	23.91	30.01	−.04	32.2	+6.7	57	17	42	7	31	23	42	25	14	49	0.06	−0.3	2	14,377	w.	82	w.	3	16	11	4	3.6	0.7	T.
Lander	5,372	60	68	24.56	30.05	−.07	27.0	+9.6	55	10	37	−4	31	17	34	22	16	65	0.41	0.0	4	4,186	w.	64	sw.	7	10	16	5	4.7	3.9	2.4
Sheridan	3,790	10	47	26.01	30.01	.....	28.4	.....	64	17	49	−11	31	17	33	23	16	62	0.57	.....	7	4,411	nw.	40	nw.	18	8	14	9	5.9	6.1	4.5
Yellowstone Park	6,200	11	48	23.77	30.08	−.06	20.8	+3.2	40	6	28	−12	30	13	33	19	14	73	1.49	−0.8	19	7,077	s.	42	s.	17	0	15	16	7.5	17.0	21.0
North Platte	2,821	11	51	27.07	30.08	−.04	32.9	+10.0	65	17	46	5	30	20	45	25	17	61	0.11	−0.4	3	5,203	w.	32	nw.	8	16	7	8	4.0	1.2	0.0
Middle Slope.							**40.4**	**+10.9**										**54**	**0.49**	**−0.2**										**4.6**		
Denver	5,292	106	113	24.65	29.98	−.07	37.9	+8.1	67	10	49	17	30	27	40	30	17	46	0.13	−0.3	2	5,960	s.	47	sw.	7	18	9	4	3.2	1.3	T.
Pueblo	4,685	80	86	25.23	29.98	−.07	39.0	+9.9	70	17	54	8	28	24	50	29	14	40	T.	−0.4	0	6,009	nw.	46	nw.	8	19	10	2	3.5	T.	0.0
Concordia	1,392	50	58	28.54	30.05	−.09	37.2	+12.8	65	17	48	14	22	26	34	30	21	61	0.01	−0.7	1	6,052	nw.	38	nw.	7	7	11	13	6.4	T.	0.0
Dodge City	2,509	11	51	27.42	30.09	−.03	39.0	+10.0	73	17	54	15	28	24	42	29	21	58	0.03	−0.4	1	6,795	nw.	38	nw.	8	15	13	3	3.8	0.1	0.0
Wichita	1,358	139	158	28.58	30.04	−.09	41.4	+11.7	68	13	52	18	6	31	28	35	27	60	0.02	−0.8	2	9,469	s.	51	s.	17	12	10	9	5.1	T.	0.0
Broken Arrow	765	11	52	29.23	30.07	.....	46.6	.....	72	8	58	24	6	35	35	.....	.....	.....	4.08	.....	8	9,755	s.	46	s.	1	13	5	13	5.6	0.5	0.0
Muskogee	652	4	.....	.....	.....	.....	48.4	.....	76	11	60	24	3	37	39	.....	.....	.....	6.23	.....	8	.....	n.	.....	.....	.....	13	9	9	.....	T.	0.0
Oklahoma City	1,214	10	47	28.77	30.07	−.04	47.8	+13.1	72	13	59	24	6	37	33	39	30	56	2.74	+1.4	3	8,755	s.	36	n.	7	16	3	12	4.7	0.0	0.0
Southern Slope.							**51.2**	**+9.7**										**48**	**1.10**	**+0.4**										**3.9**		
Abilene	1,738	10	52	28.24	30.06	−.03	53.4	+10.8	78	8	65	27	3	42	39	43	31	52	3.10	+2.2	8	7,406	sw.	39	sw.	17	14	5	12	5.1	T.	0.0
Amarillo	3,676	10	49	26.27	30.04	−.02	46.2	+12.3	73	17	60	20	3	32	41	36	26	52	0.00	−0.6	0	7,964	sw.	38	sw.	17	20	11	0	2.9	0.0	0.0
Del Rio	944	64	71	29.07	30.07	+.01	58.5	+8.3	83	7	71	36	4	46	44	.....	.....	.....	0.84	0.0	5	5,445	se.	34	n.	27	20	2	9	3.8	0.0	0.0
Roswell	3,566	75	85	26.40	30.04	.00	46.5	+7.3	76	17	61	17	3	32	49	35	19	40	0.44	0.0	2	5,376	s.	46	nw.	8	15	12	4	3.9	0.0	0.0
Southern Plateau.							**45.4**	**+4.6**										**49**	**0.23**	**−0.5**										**3.1**		
El Paso	3,762	110	133	26.24	30.05	+.04	49.1	+5.0	69	19	61	22	4	38	37	38	24	41	0.64	+0.1	4	6,753	nw.	29	n.	1	16	12	3	3.5	0.0	0.0
Santa Fe	7,013	38	53	23.24	30.10	+.06	34.9	+6.1	56	11	45	13	2	25	28	27	18	56	0.12	−0.5	3	4,805	n.	29	n.	6	15	13	3	3.6	1.3	0.0
Flagstaff	6,908	10	59	23.34	30.03	−.02	33.2	+6.5	63	10	47	−2	28	20	44	25	....	58	2.39	.....	9	5,760	w.	30	w.	6	20	6	5	....	18.7	7.0
Phoenix	1,108	11	81	28.84	30.01	−.02	55.4	+5.4	84	9	70	29	2	41	44	44	34	53	0.28	−0.9	3	3,098	e.	26	e.	22	21	4	6	2.7	0.0	0.0
Yuma	141	9	54	29.87	30.02	−.03	58.2	+3.8	81	18	71	34	4	45	37	45	30	39	T.	−0.4	0	2,537	n.	18	nw.	31	20	8	3	2.8	0.0	0.0
Independence	3,957	9	41	26.00	30.09	+.02	41.5	+1.0	72	17	55	16	31	28	38	31	19	45	0.09	−0.8	1	4,205	nw.	31	sw.	17	22	5	4	2.9	T.	0.0
Middle Plateau.							**33.3**	**+4.8**										**65**	**1.20**	**+0.2**										**5.7**		
Reno	4,532	74	81	25.49	30.12	−.01	33.2	+0.7	62	7	44	−8	31	22	38	28	21	66	1.90	0.0	8	3,985	w.	46	w.	17	6	12	13	6.5	22.9	11.0
Tonopah	6,090	12	20	24.04	30.10	.....	33.8	.....	58	7	41	5	31	27	26	27	19	61	0.76	0.0	5	5,283	se.	42	se.	22	14	10	7	4.4	12.5	10.5
Winnemucca	4,344	18	56	25.64	30.13	−.03	30.4	+1.8	57	7	41	−10	31	20	31	27	22	72	0.91	−0.1	11	5,758	sw.	42	s.	17	4	7	20	7.8	11.3	6.5
Modena	5,479	10	43	24.61	30.06	−.04	33.5	+6.0	63	7	46	2	27	20	43	26	18	58	1.40	+0.7	9	7,805	w.	46	sw.	28	16	7	8	4.2	12.1	5.9
Salt Lake City	4,360	163	203	25.65	30.10	−.05	36.0	+6.8	57	7	43	21	27	29	21	31	24	65	1.90	+0.6	12	4,675	nw.	30	s.	28	8	7	16	6.7	17.0	9.2
Grand Junction	4,602	60	68	25.42	30.08	+.02	33.5	+8.8	53	13	45	3	28	22	35	28	22	68	0.70	+0.2	4	3,681	se.	35	s.	29	12	12	7	4.6	5.6	0.0
Northern Plateau.							**35.2**	**+6.2**										**73**	**1.50**	**−0.1**										**7.7**		
Baker	3,471	48	53	26.43	30.09	−.07	30.0	+6.1	49	6	37	3	31	23	24	28	24	77	0.80	−0.5	12	4,659	se.	30	sw.	10	4	8	19	7.1	3.9	0.5
Boise	2,739	78	86	27.21	30.13	−.06	35.5	+5.7	59	9	43	10	31	28	28	32	26	66	1.62	−0.3	11	4,198	se.	28	se.	17	2	7	22	7.9	8.1	1.2
Lewiston	757	40	48	29.19	30.02	−.14	39.9	+5.4	61	7	46	19	31	34	19	.....	.....	.....	1.66	+0.1	14	3,241	e.	36	w.	17	2	12	17	7.7	0.3	0.0
Pocatello	4,477	60	68	25.47	30.10	−.10	31.5	+6.4	53	10	38	1	31	25	26	27	22	68	1.14	+0.5	12	8,824	sw.	40	sw.	6	4	7	20	7.6	8.5	4.5
Spokane	1,929	101	110	27.91	30.01	−.11	33.2	+5.7	52	6	38	2	30	28	22	32	29	81	1.90	−0.4	17	5,772	sw.	34	sw.	10	3	7	21	7.7	5.4	3.4
Walla Walla	991	57	65	28.94	30.03	−.12	40.8	+7.6	63	16	46	15	30	36	30	37	32	72	1.85	−0.2	12	5,022	s.	38	w.	7	1	8	22	8.4	1.6	0.0
North Pacific Coast Region.							**41.8**	**+1.6**										**86**	**9.07**	**+2.3**										**8.1**		
North Head	211	11	56	29.74	29.97	−.08	42.8	+1.0	53	16	46	28	30	39	14	41	40	87	10.07	+3.4	22	15,180	s.	84	s.	17	4	4	23	8.1	1.8	0.0
Port Angeles	29	8	53	29.94	29.97	.....	39.2	.....	55	16	44	19	29	34	17	.....	.....	.....	5.45	0.0	20	4,765	s.	32	sw.	7	1	7	23	8.5	2.2	0.8
Seattle	125	215	250	29.86	30.00	−.05	40.4	+1.1	53	6	44	23	30	36	13	39	36	84	7.51	+2.7	18	9,828	s.	53	sw.	7	1	9	21	8.1	1.0	T.
Tacoma	213	113	120	29.77	30.00	−.04	40.2	+2.1	53	6	44	20	30	36	16	.....	.....	.....	10.90	+5.1	20	6,563	sw.	36	sw.	7	1	10	20	8.0	5.0	0.5
Tatoosh Island	86	9	57	29.82	29.92	−.06	42.0	+0.8	52	16	45	31	30	39	11	40	38	87	14.30	+2.1	24	14,020	e.	60	s.	16	3	6	22	7.9	T.	0.0
Yakima	1,071	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medford	1,425	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Oreg	153	68	106	29.87	30.03	−.05	42.8	+3.4	56	7	47	26	30	39	14	42	40	88	9.57	+3.1	23	5,818	sw.	31	sw.	7	2	2	27	8.8	1.0	T.
Roseburg	510	9	57	29.54	30.10	.00	42.6	+1.4	63	16	48	23	30	37	26	41	38	84	5.69	0.0	24	1,978	s.	18	sw.	10	1	13	17	7.6	4.5	1.0
Middle Pacific Coast Region.							**46.0**	**−1.6**										**82**	**2.50**	**−2.0**										**6.5**		
Eureka	62	73	89	30.08	30.15	+.05	46.9	0.0	67	15	53	27	31	41	28	44	41	80	3.88	−3.8	24	4,561	se.	42	s.	16	2	11	18	7.6	0.0	0.0
Point Reyes	490	7	18	29.57	30.09	.....	48.4	−1.0	64	9	52	34	30	44	16	.....	.....	.....	1.92	.....	12	13,948	nw.	66	s.	16	9	13	9	5.4	0.0	0.0
Red Bluff	332	50	56	29.78	30.15	+.03	43.1	−2.7	63	20	50	29	26	36	28	41	37	80	1.80	−2.1	9	3,399	nw.	31	se.	27	9	8	14	6.2	0.0	0.0
Sacramento	69	106	117	30.08	30.16	+.04	43.8	−2.0	59	17	49	31	13	39	19	42	40	87	2.05	−1.6	9	4,357	se.	32	se.	22	4	11	16	7.3	0.0	0.0
San Francisco	155	208	243	29.96	30.13	+.02	48.1	−1.8	58	17	53	36	30	43	17	45	42	81	2.84	−1.5	11	4,732	n.	26	nw.	28	10	7	14	6.0	0.0	0.0
San Jose	141	12	110	29.99	30.15	.....	46.0	−2.3	64	5	55	28	31	37	28	.....	.....	.....	1.93	−1.0	10	3,395	nw.	30	se.	22	6	14	11	6.3	T.	0.0
South Pacific Coast Region.							**53.5**	**+2.2**										**69**	**2.18**	**−0.6**										**5.0**		
Fresno	327	89	98	29.79	30.16	+.06	46.2	+0.8	67	16	53	31	27	40	31	44	40	81	1.10	−0.5	7	3,386	nw.	24	se.	22	6	7	18	7.2	0.0	0.0
Los Angeles	338	159	191	29.69	30.06	−.02	58.1	+3.5	90	8	67	39	31	49	28	49	40	61	1.76	−1.1	7	3,984	e.	22	sw.	31	17	3	11	4.4	0.0	0.0
San Diego	87	62	70	29.94	30.04	−.03	56.3	+2.0	85	9	64	40	4	48	26	50	45	73	1.34	−0.7	6	3,684	nw.	25	s.	29	15	7	9	4.7	0.0	0.0
San Luis Obispo	201	32	40	29.89	30.11	+.02	53.3	+2.3	84	9	63	34	30	44	37	45	38	62	4.51	−0.2	7	4,011	n.	29	ne.	6	17	10	4	3.8	0.3	0.0
West Indies.																																
San Juan, P. R	82	9	54	29.96	30.05	.....	73.6	−1.4	80	11	78	66	26	69	12	.....	.....	.....	2.84	−1.8	24	11,910	e.	39	e.	14	7	13	11	5.8	0.0	0.0
Panama Canal.																																
Balboa Heights	118	7	97	29.73	29.85	−.01	79.0	−1.0	89	4	87	70	8	71	18	71	70	78	0.80	−0.2	4	6,840	nw.	32	n.	30	5	24	2	4.8	0.0	0.0
Colon	36	7	97	29.83	29.86	−.01	80.4	+0.4	87	13	85	72	7	76	13	74	72	76	1.98	−1.7	12	13,298	n.	36	ne.	19	4	22	5	5.3	0.0	0.0
Alaska.																																
Juneau	80	11	54	.....	.....	.....	26.5	.....	38	8	30	12	28	23	15	24	19	73	5.16	.....	21	5,858	s.	38	e.	17	7	1	23	7.9	46.2	19.0

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

Stations.	Altitude above mean sea level, Jan. 1, 1919.	Pressure.			Temperature of the air.						Precipitation.		
		Station reduced to mean of 24 hours.	Sea level reduced to mean of 24 hours.	Departure from normal.	Mean max.+mean min.÷2.	Departure from normal.	Mean maximum.	Mean minimum.	Highest.	Lowest.	Total.	Departure from normal.	Total snowfall.
	Feet.	*In.*	*In.*	*In.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	*In.*	*In.*	*In.*
St. Johns, N. F	125												
Sydney, C. B. I	48	29.84	29.89	−0.04	19.1	−1.4	27.0	11.2	44	−8	6.53	+1.43	36.5
Halifax, N. S	88	29.81	29.92	−.05	20.2	−1.6	28.4	12.0	45	−8	5.16	−0.61	26.1
Yarmouth, N. S	65												
Charlottetown, P. E. I	38	29.86	29.90	−.06	14.6	−2.4	22.7	6.4	44	−21	4.57	+0.61	43.5
Chatham, N. B	28	29.86	29.90	−.07	8.9	−0.9	19.7	−2.0	45	−35	4.10	+0.51	34.0
Father Point, Que	20												
Quebec, Ont	296	29.74	30.08	+.06	7.3	−1.8	14.4	0.1	40	−14	4.21	+0.20	33.4
Montreal, Que	187	29.86	30.09	+.05	11.5	−0.2	18.9	4.1	40	−10	3.25	−0.48	22.5
Stonecliffe, Ont	489												
Ottawa, Ont	236	29.83	30.12	+.09	8.3	−1.3	16.6	0.0	40	−17	3.15	+0.16	30.7
Kingston, Ont	285	29.74	30.08	+.03	13.5	−3.6	20.2	6.7	40	−12	1.71	−1.74	12.1
Toronto, Ont	379	29.64	30.07	+.02	21.8	+0.4	29.8	13.9	43	−12	3.17	+0.25	28.5
Cochrane, Ont	930												
White River, Ont	1,244	28.66	30.06	+.05	−1.8	−1.4	13.2	−16.8	32	−44	1.02	−0.67	10.2
Port Stanley, Ont	592												
Southampton, Ont	656	29.30			18.1	−2.3	25.8	10.3	40	−14	2.37	−1.68	22.7
Parry Sound, Ont	688	29.34	30.08	+.07	10.3	−3.5	19.7	0.9	39	−24	2.46	−1.62	24.6
Port Arthur, Ont	644	29.34	30.08	+.01	8.3	+5.2	16.7	−0.6	37	−24	0.84	+0.02	8.4
Winnipeg, Man	760	29.19	30.09	−.02	2.0	+8.8	11.6	−7.6	42	35	1.65	+0.77	16.5
Minnedosa, Man	1,690	28.11	30.05	−.05	−0.7	+6.5	8.0	−9.4	39	−37	0.69	−0.11	6.9
Le Pas, Man	860				−4.8		6.0	−15.6	25	−36	0.77		7.7
Qu'Appelle, Sask	2,115	27.59	29.96	−.12	4.1	+7.9	13.8	−5.6	44	−28	1.40	+0.90	14.0
Medicine Hat, Alb	2,144	27.52	29.86	−.21	18.4	+12.9	28.5	8.3	48	−26	0.70	+0.13	7.0
Moose Jaw, Sask	1,759				8.0		17.0	− 1.0	44	−19	0.43		4.3
Swift Current, Sask	2,392	27.26	30.01	−.08	11.6	+8.5	21.4	1.8	49	−22	0.40	−0.24	4.0
Calgary, Alb	3,428												
Banff, Alb	4,521												
Edmonton, Alb	2,150												
Prince Albert, Sask	1,450	28.36	30.04	−.05	−0.4	+8.0	11.3	−12.1	28	−39	0.45	−0.52	4.5
Battleford, Sask	1,592	28.13	29.97	−.11	2.6	+8.5	13.2	−8.0	40	−25	0.55	+0.15	5.5
Kamloops, B. C	1,262												
Victoria, B. C	230	29.69	29.95	−.02	39.7	+1.2	43.0	36.4	53	24	6.41	+1.02	1.4
Barkerville, B. C	4,180												
Triangle Island, B. C	680												
Prince Rupert, B. C	170												
Hamilton, Ber	151	30.00	30.17	+.04	61.2	−0.8	67.3	55.2	73	43	4.40	−0.54	0.0
St. Johns, N. F.[1]	125	29.65	29.79	−.04	21.5	−7.2	26.7	16.3	44	2	4.42	−0.61	30.0
Calgary, Alb.[1]	3,428	26.30	30.07	+.13	10.7	−7.5	23.6	−2.2	54	−30	0.29	−0.30	2.9
Kamloops, B. C.[1]	1,262	28.78	30.14	+.20	17.7	−11.2	21.7	13.7	46	−17	1.18	+0.40	9.7
Barkerville, B. C.[1]	4,180	25.46	29.92	+.04	11.5	−9.4	17.5	5.6	37	−23	3.75	+0.58	37.5
Hamilton, Ber.[1]	151	30.06	30.22	−.13	65.3	+0.6	71.1	59.6	76	54	3.16	−1.33	0.0

[1] Late reports, December, 1922.

SEISMOLOGICAL REPORTS FOR JANUARY, 1923.

W. J. HUMPHREYS, Professor in Charge.

[Weather Bureau, Washington, March 3, 1923]

SEISMOLOGICAL ABBREVIATIONS USED IN THE INSTRUMENTAL REPORTS.

CHARACTER OF THE EARTHQUAKE.

I=noticeable.
II=conspicuous.
III=strong.
d=(terræ motus domesticus)=local earthquake (sensible or felt).
v=(terræ motus vicinus)=near-by earthquake (within 1,000 km.).
r=(terræ motus remotus)=distant earthquake (1,000 to 5,000 km. distant).
u=(terræ motus ultimus)=very distant earthquake (beyond 5,000 km.).
Δ=distance to epicenter.

PHASES.

P=(undæ primæ)=first preliminary tremors.
PR_n=P waves reflected n times at the earth's surface.
S=(undæ secundæ)=second preliminary tremors.
SR_n=S waves reflected n times at the earth's surface.
PS=transformed waves; longitudinal (P) to transverse (S) or vice versa.
L=(undæ longæ)=long waves in the principal portion.
M=(undæ maximæ)=greatest motion in the principal portion.
C=(coda)=trailers.
O=time at epicenter.
L_{rep_1}=long waves reaching the station from the antiepicenter (40,000 km.−Δ).
L_{rep_2}=long waves again reaching the station from the antiepicenter (40,000 km.+Δ).
F=(finis)=end of perceptible trace.

NATURE OF THE MOTION.

i=(impetus)=abrupt beginning.
e=(emersio)=gradual appearance.
T=(period)=twice time of oscillation.
A=amplitude of earth's movement, reckoned from the zero line. E, N, or Z attached to a symbol signifies the E-W, the N-S, or the vertical component, respectively, thus:
P_E is the E-W component of P.
P_N is the N-S component of P.
P_Z is the vertical component of P.
μ=micron, $\frac{1}{1000}$ mm.

INSTRUMENTAL CONSTANTS.

T_0=period of instrument.
V=magnification of instrument.
ϵ=damping ratio.