Form No. 1030–Met'l

W.B.O., San Francisco, 1-2-40—800

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

MONTHLY METEOROLOGICAL SUMMARY

Station, SAN FRANCISCO, CALIF. *120th meridian time* *Month,* **December, 1939**

Date	Temperature (°F.) Thermometers over roof, 112 feet above ground: Extremes Max.	Extremes Min.	Mean	Departure from normal	Dry bulb 4:30 a. m.	Dry bulb Local noon	Dry bulb 4:30 p. m.	Moisture: Relative humidity per cent 4:30 a. m.	Relative humidity Local noon	Relative humidity 4:30 p. m.	Vapor pressure, local noon	Precipitation, inches.* Total 4:30 a. m. to 4:30 p. m.	Total Mid. to Mid.	Snowfall, un-melted 4:30 p. m. to 4:30 p. m.	Snowfall Depth on ground 4:30 p. m.	Wind: Max. velocity, miles per hour	Direction of max. velocity	Per cent of sunshine.†	Degree Days
1	64	51	58	+ 5	52.3	62.2	62.0	92	49	50	.277	0	0	0	0	10	w.	60	7
2	66	53	60	+ 7	56.6	62.1	65.8	63	53	48	.298	0	0	0	0	13	nw.	66	5
3	69	51	60	+ 7	52.2	63.1	66.6	89	53	44	.310	0	0	0	0	13	n.	100	5
4	67	53	60	+ 7	53.7	64.1	64.8	74	52	51	.310	0	0	0	0	11	nw.	100	5
5	60	49	54	+ 1	51.2	57.0	59.4	95	77	70	.360	T.	T.	0	0	13	w.	5	11
6	61	51	56	+ 3	51.9	57.4	60.0	95	69	67	.334	0	0	0	0	8	w.	27	9
7	59	48	54	+ 2	49.9	55.9	57.1	89	72	75	.322	0	0	0	0	9	e.	19	11
8	63	54	58	+ 6	55.2	61.2	61.2	83	88	83	.482	.07	.07	0	0	16	s.	0	7
9	63	58	60	+ 8	58.9	63.0	62.0	93	75	75	.432	.01	.02	0	0	27	s.	2	5
10	64	53	58	+ 6	62.2	61.2	58.5	75	84	76	.448	.15	.22	0	0	34	s.	11	7
11	60	49	54	+ 2	50.5	55.0	59.9	84	59	58	.256	0	0	0	0	13	nw.	80	11
12	58	48	53	+ 1	50.4	55.2	57.6	88	60	58	.256	0	0	0	0	13	n.	81	12
13	64	49	56	+ 4	51.3	57.8	59.0	80	63	64	.322	0	0	0	0	13	w.	79	9
14	58	49	54	+ 3	50.3	54.3	57.9	87	74	66	.310	0	0	0	0	8	se.	26	11
15	61	51	56	+ 5	52.1	58.0	59.1	83	67	62	.322	0	0	0	0	10	n.	54	9
16	62	51	56	+ 5	52.0	57.3	59.8	94	81	73	.387	0	0	0	0	10	e.	23	9
17	63	52	58	+ 7	53.7	57.9	60.0	98	90	68	.432	0	.03	0	0	7	nw.	46	7
18	64	50	57	+ 6	51.4	60.0	63.6	86	55	46	.287	0	0	0	0	9	n.	95	8
19	59	50	54	+ 3	51.1	58.0	56.8	81	72	82	.347	.01	.01	0	0	17	nw.	58	11
20	62	50	56	+ 5	52.7	56.4	61.7	77	58	57	.266	0	0	0	0	12	nw.	73	9
21	63	48	56	+ 6	49.2	58.7	60.5	86	45	50	.219	0	0	0	0	13	n.	100	9
22	54	47	50	0	51.6	51.9	53.0	44	46	50	.180	0	T.	0	0	13	n.	34	15
23	52	47	50	0	50.7	48.0	50.1	72	79	80	.266	.24	.24	0	0	17	n.	0	15
24	58	47	52	+ 2	49.6	52.6	58.0	80	62	53	.247	0	0	0	0	10	n.	86	13
25	59	44	52	+ 2	45.3	56.8	53.8	88	46	77	.211	0	T.	0	0	14	w.	67	13
26	55	49	52	+ 2	49.1	53.0	55.0	93	91	65	.360	.03	.04	0	0	8	e.	5	13
27	54	49	52	+ 2	50.0	51.0	53.0	87	86	80	.322	0	0	0	0	9	n.	0	13
28	57	51	54	+ 4	51.1	54.9	51.9	76	69	77	.287	0	.14	0	0	8	e.	0	11
29	60	51	56	+ 6	52.6	60.4	56.7	91	70	62	.360	T.	.05	0	0	10	n.	11	9
30	59	49	54	+ 4	50.8	54.2	53.2	96	81	79	.334	0	0	0	0	10	n.	16	11
31	58	52	55	+ 5	52.6	55.9	57.8	96	97	95	.432	.23	.23	0	0	10	sw.	0	10
Mean	60.5	50.1	55.3		52.0	57.2	58.8	84	69	66	.322	§0.74	§1.05	§0	§0			43	§300
Normal	56.1	46.5	51.3					83	68	71			3.95					55	

Atmospheric Pressure, (in inches)
(Reduced to sea-level)

Mean 30.11
Highest ..... 30.32; date, 20
Lowest ..... 29.67; date, 23

Temperature

Highest ..... 69, date, 3
Lowest ..... 44; date, 25
Greatest daily range ..... 18; date, 3
Total degree days 300
Accumulated excess (+) or deficiency (−) since January 1, +518
Average daily excess (+) or deficiency (−) since January 1, +1.4

Precipitation*

Greatest this month in 5 minutes, .02, date, 31; in 10 minutes, .03, date, 23; in 15 minutes, .04, date, 23; in 30 minutes, .07, date, 31; in 1 hour, .12, date, 23; in 2 hours, .20, date, 23; in 24 hours, .24, date, 23.

Precipitation—Continued

Excess (+) or deficiency (−) this month as compared with normal, −2.90.
Seasonal precipitation, since July 1, 2.48.
Accumulated excess (+) or deficiency (−) since July 1, −5.42.
Annual precipitation, since January 1, 11.16
Accumulated excess (+) or deficiency (−) since January 1, −10.86.
Greatest snowfall in 24 hours, 0

Weather
(Number of days)

Clear (scale 0 to 3) 6
Partly cloudy (scale 4 to 7) 3
Cloudy (scale 8 to 10) 22
With 0.01 inch or more precipitation 10
With 0.25 inch or more precipitation 0
Total sunshine, hours 127.0

Wind‡

Total movement (miles) 4,469
Average hourly velocity (miles) 6.0
Maximum velocity (miles) ..... 34 on 10th
Prevailing direction ..... North

Miscellaneous Phenomena
(Dates of)

Frosts: Light 0
Heavy 25
Killing 0
Auroras 0
Halos: Solar .... 1, 2 Lunar 2, 26
Hail ..... 0 Sleet 0
Dense Fog 0
Thunderstorms 0

*"T", trace, amount too small to measure. ‡All wind data are true values. §Sum.
†Number hours possible sunshine: 1st, 9.7; 16th, 9.5; 31st, 9.6; for this month, 296.3.

E. H. BOWIE (over)

Precipitation, December, 1939

Date	Hourly Amounts A. M. 1	2	3	4	5	6	7	8	9	10	11	12	P. M. 1	2	3	4	5	6	7	8	9	10	11	12	Total
1																									0
2																									0
3																									0
4																									0
5													T.	T.											T.
6																									0
7																									0
8					T.	T.	T.	.01	T.	.02	.02	T.				.02				T.	T.				0.07
9				.01	T.	.01																			0.02
10		.02	.01						T.	.05	.03	.03	.01	T.	.03			T.		.02	.02				0.22
11																									0
12																									0
13																									0
14																									0
15																									0
16																									0
17		T.	.02	.01																					0.03
18																									0
19														.01											0.01
20																									0
21																									0
22																						T.	T.		T.
23				T.	T.		.06	.11	.04	.01	.02	T.	T.	T.											0.24
24																									0
25																								T.	T.
26	.01						.01	T.	.01	T.	.01														0.04
27																									0
28																				.01	.03	.01	.05	.04	0.14
29	.05								T.																0.05
30																									0
31					T.	T.	T.	T.	.01			.11	.06	.05	T.	T.	T.	T.	T.						0.23
Total	0.06	0.02	0.03	0.02	T.	0.01	0.07	0.12	0.06	0.08	0.08	0.14	0.07	0.06	0.03	0.02	T.	T.	T.	0.03	0.05	0.01	0.05	0.04	1.05

COMPARATIVE DATA FOR THIS MONTH FROM THE RECORDS OF PREVIOUS YEARS

Station, San Francisco, Calif. *Month,* December

	Temperature Mean	Highest	Lowest	Precipitation Total	Greatest in 24 Hours		Temperature Mean	Highest	Lowest	Precipitation Total	Greatest in 24 Hours		Temperature Mean	Highest	Lowest	Precipitation Total	Greatest in 24 Hours		Temperature Mean	Highest	Lowest	Precipitation Total	Greatest in 24 Hours
1871	52.9	62	42	11.36	3.14	1890	49.8	60	39	3.25	1.90	1909	49.2	63	38	5.59	1.41	1928	49.6	63	36	4.89	1.40
1872	52.1	62	41	5.95	2.33	1891	49.6	64	37	5.62	2.21	1910	53.0	68	43	1.73	0.99	1929	51.2	74	39	3.09	1.29
1873	50.7	59	44	9.72	2.33	1892	51.1	64	38	5.08	2.34	1911	51.7	71	39	2.54	0.66	1930	52.1	63	39	0.98	1.32
1874	50.3	62	40	0.33	0.15	1893	52.4	72	37	2.25	0.97	1912	51.6	67	41	1.30	0.59	1931	49.4	60	39	9.24	2.69
1875	51.4	65	39	4.15	1.50	1894	49.7	61	40	9.01	1.64	1913	50.6	66	41	5.41	1.14	1932	47.4	65	27	2.75	1.07
1876	53.0	64	42	0.00	0.00	1895	48.6	60	39	1.43	0.51	1914	48.7	67	41	5.49	1.59	1933	50.5	64	39	4.19	1.43
1877	52.7	64	42	2.66	1.11	1896	52.8	64	42	4.31	1.65	1915	52.2	66	36	6.42	3.40	1934	52.9	69	42	4.06	1.51
1878	51.6	68	40	0.58	0.33	1897	50.7	63	39	1.22	1.02	1916	48.9	62	37	4.79	1.30	1935	52.8	63	43	3.25	1.33
1879	50.0	64	34	4.46	1.55	1898	49.7	66	38	1.62	0.70	1917	54.6	68	43	0.72	0.67	1936	51.6	67	40	2.94	1.06
1880	53.2	61	42	12.33	2.36	1899	49.6	63	37	2.65	1.17	1918	50.2	64	38	2.62	1.49	1937	54.8	69	49	3.73	1.93
1881	51.0	63	43	3.85	1.35	1900	50.2	63	40	1.37	0.74	1919	48.8	62	37	3.21	1.09	1938	53.6	67	43	1.48	0.70
1882	52.8	65	34	2.01	0.76	1901	52.9	72	41	0.90	0.34	1920	51.0	61	42	7.48	2.02	1939	55.3	69	44	1.05	0.24
1883	50.8	62	40	0.92	0.28	1902	50.6	62	39	2.32	0.85	1921	52.9	66	44	6.39	2.04						
1884	52.8	64	40	7.63	2.07	1903	52.4	66	42	1.63	1.06	1922	50.6	61	41	7.77	1.81						
1885	54.0	67	44	4.99	2.78	1904	50.6	61	38	1.59	0.57	1923	51.0	65	42	1.91	1.18						
1886	53.6	66	43	2.07	1.10	1905	50.7	67	39	2.05	0.65	1924	47.8	62	36	7.37	3.44						
1887	52.2	60	40	3.34	1.14	1906	49.6	61	40	6.90	2.47	1925	52.7	70	40	1.01	0.50						
1888	53.2	65	43	5.80	1.51	1907	52.4	68	41	3.66	0.96	1926	51.5	68	39	1.04	0.35						
1889	51.3	63	40	13.81	1.46	1908	47.0	61	35	2.15	0.99	1927	51.8	72	43	9.34	0.91						

Temperature (1871-1939)

Highest this month.....74; date, 5, 1929
Lowest this month .....27; date, 11, 1932

Precipitation (1906-1939)

Greatest fall this month in—

5 minutes.....0.21; date, 22, 1913
10 minutes.....0.26; date, 10, 1906
15 minutes.....0.36; date, 10, 1906
30 minutes.....0.50; date, 10, 1906
1 hour.....0.70; date, 21, 1924
2 hours.....1.09; date, 21, 1924
24 hours (1871-1939) ..... 3.44; date, 20-21, 1924

†Also other years.

Precipitation—Continued

Greatest snowfall in 24 hours this month since 1871: amount, 3.5;

Greatest total snowfall this month since 1871, 3.5;

Wind* (1890-1938)

Average hourly velocity (miles)..... 7.4
Prevailing direction..... north

*Wind velocities have been corrected to true values.

Weather (1885-1938)

Average number days this month—
Clear 12
Partly cloudy.....8
Cloudy 11

Weather (1871-1938)

Average number days this month—
With 0.01 inch or more of precipitation.....11
With 0.25 inch or more of precipitation..... 5
Greatest number of days this month with 0.01 inch or more of precipitation, 24; year, 1889

Frost (1897-1938)

Average date last killing frost in spring...Jan. 18
Latest date last killing frost in spring.....Mar. 27
Average date first killing frost in autumn. Dec. 29
Earliest date first killing frost in autumn..Dec. 4