Form No. 1080–Met'l

W.B.O., San Francisco, 12-1-39–300

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# MONTHLY METEOROLOGICAL SUMMARY

*Station,* SAN FRANCISCO, CALIF. *120th meridian time* *Month,* **November, 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 | Wind: Direction of max. velocity | Per cent of sunshine.† | Degree Days |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 63 | 52 | 58 | − 1 | 53.2 | 60.0 | 56.0 | 92 | 77 | 83 | .402 | 0 | 0 | 0 | 0 | 19 | w. | 48 | 7 |
| 2 | 63 | 52 | 58 | − 1 | 53.0 | 62.0 | 59.0 | 87 | 63 | 81 | .347 | 0 | 0 | 0 | 0 | 14 | w. | 53 | 7 |
| 3 | 63 | 53 | 58 | 0 | 53.1 | 62.4 | 59.9 | 87 | 57 | 62 | .322 | 0 | 0 | 0 | 0 | 17 | w. | 78 | 7 |
| 4 | 68 | 51 | 60 | + 2 | 53.0 | 65.8 | 60.9 | 88 | 29 | 64 | .187 | 0 | 0 | 0 | 0 | 16 | w. | 73 | 5 |
| 5 | 69 | 50 | 60 | + 2 | 50.5 | 64.6 | 62.0 | 89 | 40 | 55 | .247 | 0 | 0 | 0 | 0 | 14 | w. | 100 | 5 |
| 6 | 78 | 52 | 65 | + 7 | 52.9 | 69.6 | 69.0 | 88 | 49 | 35 | .360 | 0 | 0 | 0 | 0 | 8 | w. | 100 | 0 |
| 7 | 73 | 52 | 62 | + 4 | 55.9 | 69.6 | 67.6 | 75 | 35 | 32 | .256 | 0 | 0 | 0 | 0 | 17 | w. | 86 | 3 |
| 8 | 59 | 51 | 55 | − 3 | 51.9 | 55.4 | 56.9 | 89 | 69 | 83 | .298 | 0 | 0 | 0 | 0 | 21 | w. | 60 | 10 |
| 9 | 65 | 50 | 58 | 0 | 51.2 | 62.2 | 59.4 | 85 | 58 | 65 | .322 | 0 | 0 | 0 | 0 | 14 | w. | 83 | 7 |
| 10 | 67 | 52 | 60 | + 3 | 52.9 | 66.0 | 63.2 | 88 | 45 | 62 | .287 | 0 | 0 | 0 | 0 | 10 | w. | 83 | 5 |
| 11 | 70 | 53 | 62 | + 5 | 53.9 | 69.0 | 66.1 | 78 | 42 | 53 | .287 | 0 | 0 | 0 | 0 | 11 | w. | 94 | 3 |
| 12 | 72 | 53 | 62 | + 5 | 55.7 | 70.2 | 61.9 | 78 | 37 | 58 | .277 | 0 | 0 | 0 | 0 | 11 | w. | 69 | 3 |
| 13 | 61 | 52 | 56 | − 1 | 53.2 | 58.2 | 57.2 | 82 | 65 | 69 | .322 | 0 | 0 | 0 | 0 | 12 | w. | 67 | 9 |
| 14 | 63 | 52 | 58 | + 1 | 55.3 | 60.2 | 58.0 | 88 | 67 | 81 | .347 | T. | T. | 0 | 0 | 17 | w. | 69 | 7 |
| 15 | 66 | 49 | 58 | + 2 | 52.3 | 59.5 | 61.7 | 97 | 66 | 69 | .334 | 0 | 0 | 0 | 0 | 9 | nw. | 72 | 7 |
| 16 | 69 | 51 | 60 | + 4 | 52.3 | 66.2 | 68.1 | 87 | 53 | 40 | .334 | 0 | 0 | 0 | 0 | 8 | nw. | 92 | 5 |
| 17 | 65 | 52 | 58 | + 2 | 51.1 | 65.2 | 60.0 | 75 | 56 | 79 | .347 | 0 | 0 | 0 | 0 | 16 | w. | 76 | 7 |
| 18 | 70 | 50 | 60 | + 4 | 52.1 | 69.2 | 63.4 | 90 | 45 | 50 | .310 | 0 | 0 | 0 | 0 | 13 | w. | 100 | 5 |
| 19 | 73 | 50 | 62 | + 6 | 50.4 | 64.9 | 68.0 | 96 | 40 | 51 | .247 | 0 | 0 | 0 | 0 | 9 | w. | 100 | 3 |
| 20 | 72 | 52 | 62 | + 7 | 53.1 | 64.3 | 65.4 | 72 | 41 | 46 | .247 | 0 | 0 | 0 | 0 | 10 | w. | 100 | 3 |
| 21 | 70 | 50 | 60 | + 5 | 51.8 | 63.7 | 58.0 | 88 | 45 | 82 | .266 | 0 | 0 | 0 | 0 | 17 | w. | 79 | 5 |
| 22 | 72 | 50 | 61 | + 6 | 52.6 | 64.9 | 72.2 | 98 | 48 | 28 | .287 | 0 | 0 | 0 | 0 | 10 | n. | 79 | 4 |
| 23 | 71 | 55 | 63 | + 8 | 57.4 | 68.0 | 63.8 | 62 | 40 | 39 | .277 | 0 | 0 | 0 | 0 | 13 | nw. | 91 | 2 |
| 24 | 65 | 52 | 58 | + 3 | 54.6 | 61.2 | 59.8 | 79 | 66 | 73 | .347 | 0 | 0 | 0 | 0 | 15 | sw. | 76 | 7 |
| 25 | 61 | 51 | 56 | + 1 | 52.0 | 56.8 | 59.9 | 94 | 73 | 68 | .347 | .17 | .20 | 0 | 0 | 24 | se. | 57 | 9 |
| 26 | 63 | 50 | 56 | + 2 | 51.1 | 62.8 | 58.7 | 93 | 59 | 63 | .334 | 0 | 0 | 0 | 0 | 9 | w. | 90 | 9 |
| 27 | 63 | 49 | 56 | + 2 | 50.1 | 58.9 | 58.5 | 90 | 73 | 70 | .360 | 0 | 0 | 0 | 0 | 12 | w. | 77 | 9 |
| 28 | 67 | 53 | 60 | + 6 | 55.7 | 64.0 | 62.0 | 52 | 34 | 45 | .203 | 0 | 0 | 0 | 0 | 14 | w. | 100 | 5 |
| 29 | 61 | 50 | 56 | + 2 | 50.9 | 58.1 | 57.2 | 88 | 55 | 75 | .256 | 0 | 0 | 0 | 0 | 12 | w. | 49 | 9 |
| 30 | 58 | 50 | 59 | + 5 | 51.3 | 59.0 | 63.7 | 94 | 57 | 56 | .287 | 0 | 0 | 0 | 0 | 9 | w. | 89 | 6 |
| .. | .. | .. | .. | .... | .... | .... | .... | .. | .. | .. | .... | ..... | ..... | . | . | .. | ..... | ... | .. |
| Mean | 67.0 | 51.3 | 59.2 | | 52.9 | 63.4 | 62.1 | 85 | 53 | 60 | .302 | $0.17 | $0.20 | $0 | $0 | | | 85 | $173 |
| Normal | 62.2 | 50.4 | 56.3 | | | | | 84 | 60 | 68 | | | 2.35 | | | | | 61 | |

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

Mean.....30.08
Highest.....30.26; date, 30
Lowest.....29.86; date, 25

**Temperature**

Highest.....78; date, 6
Lowest.....49; date, 15, 27
Greatest daily range.....26; date, 6
Total degree days.....173
Accumulated excess (+) or deficiency (−) since January 1, +392
Average daily excess (+) or deficiency (−) since January 1, +1.2.

**Precipitation***

Greatest this month in 5 minutes, .02, date, 25; in 10 minutes, .03, date, 25; in 15 minutes, .04, date, 25; in 30 minutes, .07, date, 25; in 1 hour, .10, date, 25; in 2 hours, .17, date, 25; in 24 hours, .20, date, 25.

**Precipitation—Continued**

Excess (+) or deficiency (−) this month as compared with normal, −2.15.
Seasonal precipitation, since July 1, 1.43.
Accumulated excess (+) or deficiency (−) since July 1, −2.52.
Annual precipitation, since January 1, 10.11
Accumulated excess (+) or deficiency (−) since January 1, −7.96.
Greatest snowfall in 24 hours, 0

**Weather**
(Number of days)

Clear (scale 0 to 3).....16
Partly cloudy (scale 4 to 7).....8
Cloudy (scale 8 to 10).....6
With 0.01 inch or more precipitation.....1
With 0.25 inch or more precipitation.....0
Total sunshine, hours.....241.5

**Wind‡**

Total movement (miles).....3,923
Average hourly velocity (miles).....5.4
Maximum velocity (miles).....24 on 25th
Prevailing direction.....West

**Miscellaneous Phenomena**
(Dates of)

Frosts: Light.....0
Heavy.....0
Killing.....0
Auroras.....0
Halos: Solar.... 29 Lunar.....29
Hail.....0 Sleet.....0
Dense Fog.....22
Thunderstorms.....0

*"T", trace, amount too small to measure. ‡All wind data are true values. §Sum.
†Number hours possible sunshine: 1st, 10.6; 16th, 10.1; 30th, 9.7; for this month, 303.7.

E. H. BOWIE (OVER)

San Francisco

# Precipitation, November, 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 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 14 | | | | | | T. | T. | | | | | | | | | | | | | | | | | | T. |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 25 | | | | .02 | .10 | .06 | .02 | | | | | | | | | | | | | | | | | | 0.20 |
| 26 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 27 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 28 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 29 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 30 | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| .. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 0 | 0 | 0 | 0.02 | 0.10 | 0.06 | 0.02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.20 |

## COMPARATIVE DATA FOR THIS MONTH FROM THE RECORDS OF PREVIOUS YEARS

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

| | 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 | 55.1 | 78 | 45 | 2.61 | 1.24 | 1890 | 59.0 | 78 | 46 | 0.00 | 0.00 | 1909 | 54.8 | 74 | 43 | 2.43 | 0.97 | 1928 | 56.4 | 70 | 45 | 3.35 | 1.48 |
| 1872 | 56.0 | 67 | 44 | 2.79 | 2.06 | 1891 | 58.6 | 78 | 47 | 0.56 | 0.26 | 1910 | 54.8 | 76 | 44 | 0.48 | 0.27 | 1929 | 59.7 | 82 | 46 | 0.00 | 0.00 |
| 1873 | 57.7 | 72 | 47 | 1.16 | 0.80 | 1892 | 56.9 | 78 | 42 | 3.91 | 1.46 | 1911 | 57.3 | 77 | 42 | 0.60 | 0.45 | 1930 | 58.0 | 79 | 45 | 1.56 | 1.04 |
| 1874 | 56.1 | 69 | 44 | 6.55 | 3.98 | 1893 | 55.6 | 74 | 44 | 4.18 | 1.69 | 1912 | 56.6 | 68 | 46 | 1.94 | 0.94 | 1931 | 51.4 | 80 | 39 | 2.93 | 2.05 |
| 1875 | 57.4 | 68 | 49 | 7.27 | 2.37 | 1894 | 59.4 | 70 | 46 | 0.88 | 0.88 | 1913 | 55.2 | 72 | 46 | 6.22 | 2.21 | 1932 | 60.6 | 82 | 49 | 1.00 | 0.61 |
| 1876 | 58.0 | 70 | 50 | 0.25 | 0.19 | 1895 | 56.2 | 83 | 42 | 1.78 | 1.06 | 1914 | 59.0 | 77 | 45 | 0.70 | 0.35 | 1933 | 60.0 | 80 | 46 | 0.00 | 0.00 |
| 1877 | 57.2 | 69 | 49 | 1.57 | 0.56 | 1896 | 58.4 | 66 | 38 | 4.56 | 2.79 | 1915 | 56.1 | 75 | 45 | 0.92 | 0.66 | 1934 | 58.5 | 76 | 49 | 3.76 | 1.44 |
| 1878 | 57.1 | 68 | 47 | 0.57 | 0.45 | 1897 | 63.1 | 68 | 44 | 1.05 | 0.42 | 1916 | 54.4 | 73 | 44 | 1.50 | 0.76 | 1935 | 54.8 | 71 | 42 | 1.24 | 1.08 |
| 1879 | 55.0 | 65 | 45 | 4.03 | 1.38 | 1898 | 55.4 | 78 | 43 | 0.46 | 0.36 | 1917 | 58.7 | 72 | 48 | 0.81 | 0.40 | 1936 | 58.0 | 78 | 45 | 0.01 | 0.01 |
| 1880 | 54.2 | 75 | 41 | 0.33 | 0.32 | 1899 | 56.8 | 65 | 48 | 3.79 | 1.51 | 1918 | 55.6 | 72 | 45 | 5.60 | 2.25 | 1937 | 58.2 | 74 | 49 | 2.46 | 0.65 |
| 1881 | 55.1 | 66 | 44 | 1.91 | 1.34 | 1900 | 56.3 | 79 | 45 | 3.91 | 1.66 | 1919 | 56.0 | 73 | 38 | 0.44 | 0.44 | 1938 | 56.8 | 73 | 44 | 0.88 | 0.50 |
| 1882 | 53.2 | 64 | 45 | 4.18 | 2.41 | 1901 | 57.2 | 75 | 49 | 3.48 | 1.59 | 1920 | 55.4 | 69 | 45 | 2.70 | 0.66 | 1939 | 59.2 | 78 | 49 | 0.20 | 0.20 |
| 1883 | 54.1 | 67 | 44 | 1.60 | 1.01 | 1902 | 54.8 | 67 | 45 | 1.98 | 1.39 | 1921 | 57.8 | 79 | 45 | 1.48 | 0.85 | | | | | | |
| 1884 | 57.4 | 70 | 50 | 0.26 | 0.19 | 1903 | 56.6 | 67 | 46 | 4.25 | 2.39 | 1922 | 54.3 | 65 | 43 | 3.77 | 2.09 | | | | | | |
| 1885 | 57.8 | 70 | 50 | 11.78 | 2.58 | 1904 | 58.0 | 74 | 49 | 1.07 | 0.56 | 1923 | 60.8 | 78 | 51 | 0.49 | 0.29 | | | | | | |
| 1886 | 56.8 | 75 | 45 | 0.84 | 0.77 | 1905 | 56.2 | 74 | 44 | 0.92 | 0.38 | 1924 | 56.7 | 78 | 46 | 1.50 | 0.86 | | | | | | |
| 1887 | 56.4 | 74 | 42 | 0.99 | 0.48 | 1906 | 55.4 | 77 | 40 | 1.69 | 0.67 | 1925 | 56.6 | 66 | 47 | 2.32 | 0.52 | | | | | | |
| 1888 | 57.0 | 74 | 47 | 3.99 | 1.68 | 1907 | 57.8 | 78 | 45 | 0.04 | 0.02 | 1926 | 60.9 | 79 | 49 | 7.21 | 1.75 | | | | | | |
| 1889 | 58.6 | 77 | 47 | 2.90 | 0.92 | 1908 | 55.4 | 74 | 44 | 1.34 | 0.70 | 1927 | 58.1 | 77 | 44 | 3.18 | 1.36 | | | | | | |

### Temperature (1871-1939)

Highest this month.....83; date, 16, 1919
Lowest this month .....38; date, 27, 1895

### Precipitation (1906-1939)

Greatest fall this month in—

5 minutes.....0.33; date, 25, 1926
10 minutes.....0.51; date, 4, 1918
15 minutes.....0.65; date, 4, 1934†
30 minutes.....0.81; date, 4, 1918
1 hour, .....0.92; date, 4, 1918
2 hours, .....0.95; date, 4, 1918
24 hours (1871-1939) .....3.98; date, 23, 1874

†Also other years.

### Precipitation—Continued

Greatest snowfall in 24 hours this month since 1871: amount, 0.0;

Greatest total snowfall this month since 1871: 0.0;

### Wind* (1890-1938)

Average hourly velocity (miles).....7.5
Prevailing direction .....west

*Wind velocities have been corrected to true values.

### Weather (1885-1938)

*Average number days this month—*

Clear .....14
Partly cloudy.....8
Cloudy .....8

### Weather (1871-1938)

Average number days this month—
With 0.01 inch or more of precipitation.....7
With 0.25 inch or more of precipitation.....3
Greatest number of days this month with 0.01 inch or more of precipitation, 21; year, 1885

### 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