NOAA TECHNICAL MEMORANDUM
NWS WR-65

CLIMATE OF SACRAMENTO, CALIFORNIA

Richard Honton
Tony Martini (Retired)
National Weather Service Office
Sacramento, California

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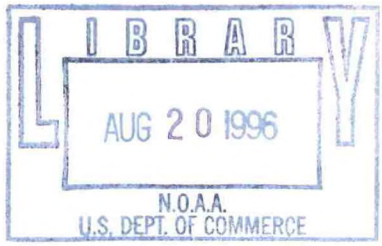

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Fifth Revision

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This publication has been reviewed and is approved for publication by Scientific Services Division, Western Region

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I. CLIMATE OF SACRAMENTO, CALIFORNIA

NARRATIVE CLIMATOLOGICAL SUMMARY

The Southern Sacramento Valley, including the city of Sacramento, is blessed with a mild climate and an abundance of sunshine the year-round. The summers are virtually cloudless with warm, dry days and mild, pleasant nights. During the winter "rainy season" (November through February), over half the total annual precipitation falls, yet rain in measurable amounts occurs only about 10 days monthly during the winter. Mountains surround the Sacramento Valley to the west, north and east. The Sierra Nevada snowfields are only 70 miles east of Sacramento and usually provide a plentiful supply of water to the valley streams during the dry season. Because of the shielding influence of the high mountains, winter storms reach the valley in a modified form. However, torrential rain and heavy snow frequently fall on the western Sierra slopes, the southern Cascades, and to a lesser extent, the Coastal Range. As a result, flood conditions occasionally occur along the Sacramento River and its tributaries. Excessive rainfall and damaging wind storms occur infrequently.

The prevailing wind in Sacramento is southerly all year. This is due to the north-south orientation of the valley and the deflecting effects of the towering Sierra Nevada on the prevailing oceanic wind that moves through the Carquinez Strait near the delta, at the junction of the Sacramento and San Joaquin Rivers. No other tidewater gap exists in the coastal mountains to admit significant marine air into the Sacramento or the San Joaquin Valleys. Occasionally, a strong north or northeasterly barometric pressure gradient develops, forcing air south or southwestward down the Siskiyou Mountains or the Sierra Nevada. This air is warmed by compression as it descends, reaching the valley floor as a hot, dry north wind. Heat waves in the summer are produced by these winds and, fortunately, are usually followed within two or three days by the normally cool southwest delta breezes, especially at night.

Summer nights in the Southern Sacramento Valley are usually pleasant. This is primarily the result of the refreshing breezes blowing up from the San Francisco Bay through the delta. The exception is when the north or northeasterly pressure difference develops during heat waves, causing light northerly breezes to continue through the night.

It is well known that relative humidity has a marked influence on the reaction of plants and animals to temperature. The extremely low relative humidity that accompanies high temperatures in the valley during the summer should be considered when comparing temperatures with those of cities in more humid regions.

Thunderstorms in Sacramento are few in number and usually occur in the late fall or in the spring. Snow is so rare and falls in such small amounts that its occurrence may be disregarded as a climatic feature. Dense fog occurs mostly in mid-winter, seldom in the spring or autumn, and

never in the summer. Light and moderate fog is more frequent and may happen anytime during the wet, cold season. Fog is usually of the radiational cooling type and is confined to the early morning hours. Under stagnant atmospheric conditions, winter fog can become very persistent and may continue for several days.

Sacramento is the geographical hub of the great Central Valley of California. This region produces a wide variety of fruits, cereals, vegetables and nuts, ranging from the semi-tropical to the hardier varieties.

A HISTORY OF WEATHER OBSERVATIONS AT SACRAMENTO

The first governmental weather service for Sacramento, under the U.S. Army Signal Service, got off to an auspicious start when the briefest of telegrams was sent back to Washington, D.C. The telegram, dated June 23, 1877, stated simply, "ARRIVED." This announced the arrival in Sacramento of Sgt. R.B. Watkins. Records indicate that Sgt. Watkins took the first official weather observation at 4:37 AM, July 1, 1877.

The first weather office was located on the fourth floor of the St. George Building, on 4th and J Streets. It consisted of two rooms--one for the weather office and the other for the living quarters. The meteorological variables observed by Sgt. Watkins would do justice to many of the electronic, computer assisted observational programs of present day.

Through the years, the Sacramento weather office has changed locations several times. In succession, the office has been located at the following addresses:

4th and J Streets (St. George Building), July 1, 1877 to November 27, 1879.

2nd and K Streets (Fratts Building), November 28, 1879 to May 31, 1882.

1006 2nd Street (Arcade Building), June 1, 1882 to January 31, 1884.

117 J Street (Lyon and Curtis Building), February 1, 1884 to April 30, 1894

7th and K Streets (Old Post Office Building), May 1, 1894 to October 31, 1933.

9th and I Streets (New Post Office and Courthouse Building), November 1, 1933 to November 19, 1958.

1725 23rd Street (State of California Building), November 20, 1958 to September 28, 1964.

1416 9th Street (Resources Building), September 29, 1964 to August 14, 1995.

3310 El Camino Avenue, August 15, 1995 to present. (Note: The temperature and precipitation sensors used for much of the information in this publication are currently located on top of the Post Office Building on 9th and I Streets. The data is remoted to the Weather Service Office.)

As the complexity of living changed over the past century, so did the services provided by the Sacramento weather office. Local forecasts now cover the foothills of the Sierra Nevada, as well as the Southern Sacramento Valley. The office's warning responsibility area encompasses 16 counties in northern and central California. Special, detailed forecasts for forestry, hydrology, and winter trans-Sierra Nevada travel are also provided.

The commissioning of the WSR-57 weather radar on February 2, 1960, added a valuable tool for more precise, short-range weather forecasts. On December 6, 1995 the WSR 88D Doppler Radar was commissioned. Used in conjunction with satellite data, radar can detect the small-scale weather features that are of importance to state and federal agencies involved in major river flood warning and control, and forestry operations, for example.

The advances in the science of meteorology could not have been dreamed of even by the most visionary meteorologist a century ago. The thousands of observations made daily, world-wide, all combine to work toward a successful answer to the very basic question: "What's the weather going to be?".

SOME HIGHLIGHTS OF THE WEATHER RECORDS IN SACRAMENTO

Many unusual weather events have taken place in Sacramento since official weather observations began July 1, 1877. The following is a brief description of some of the more extreme conditions recorded since then.

The all-time high temperature in downtown Sacramento of 114 degrees occurred on July 17, 1925. Wind conditions on that date were light and mostly from a southeasterly direction. The early morning low temperature was a very warm 74 degrees. A strong delta breeze (up to 28 mph) developed the following afternoon, dropping the maximum temperature to a relatively mild 97 degrees.

The longest consecutive stretch of days with maximum temperatures 105 degrees or higher in Sacramento was seven days. This occurred August 5-11, 1990.

The greatest number of consecutive days with maximum temperatures 100 degrees or higher is nine. This has happened three times since temperature records began in July 1877: August 1-9, 1966; June 19-27, 1981; and July 10-18, 1984.

Heat waves having one or two day breaks between consecutive 100 degree-plus days have taken place quite frequently in the past. Two periods stand out significantly, however, and occurred

during the summers of 1929 and 1980. In 1929, days with maximum temperatures 100 degrees or higher were recorded from June 20 through June 26, and again from June 29 through July 5. The two day break on the 27th and 28th had maximum temperatures of 99 degrees, and 91 degrees, respectively. In all, the period had 14 out of 16 days with maximum temperatures 100 degrees or higher.

In 1980, days with maximum temperatures of 100 degrees or higher occurred from July 21 through July 27, and again from July 29 through August 1. The one day break on the 28th had clouds and scattered light showers that held the maximum temperature to only 95 degrees. All in all, there were 11 of 12 days with maximum temperatures 100 degrees or higher.

The coldest temperature ever recorded in the downtown area was 17 degrees on December 11, 1932. This record low temperature was part of a cold snap that lasted from December 9 through December 15. Minimum temperatures during this period dropped to the teens and low 20s every night. Crop damage, as one might expect, was quite extensive, especially in the citrus orchards of Fair Oaks and Orangevale, where temperatures dipped to as low as 11 degrees above zero. The celery and lettuce crops in the delta were also hard hit. Ice thick enough for skating formed on the small lakes and ponds at Southside and McKinley Parks, with a layer of ice one-sixteenth of an inch thick reported on the Sacramento River. The cold snap broke on December 16 when a warm and moist storm from the mid-Pacific moved into northern California. A cold snap during the winter of 1990 was equally as devastating. It was during this period that downtown Sacramento had a record number of days (11) with minimum temperatures of 32 degrees or lower from December 20, 1990, through January 1, 1991.

Snow in Sacramento is extremely rare. Most of the snow that has been observed in Sacramento occurs in January. The most snowfall measured in the downtown area in any 24-hour period was 3.5 inches, January 4-5, 1888. The heaviest snowfall in recent years took place February 5, 1976, when 2 inches was reported at Sacramento's Executive Airport. Ironically, this happened during one of the drought years.

The all-time record for rainfall during any 24-hour period in Sacramento is 7.24 inches on April 19-20, 1880. Streets were described as "...having the appearance of miniature rivers". The rainstorm was also reported (colorfully) in such terms as "...steady and business-like", "...a perfect torrent", and "...more like a catarrh than an April shower".

The record maximum one-hour rainfall is 1.65 inches, which fell during the evening of April 7, 1935. Thunderstorms in the area were responsible for the "catarrh," with considerable street flooding reported. (Note: hourly rainfall records are only available after 1903).

January 1862, with 15.04 inches, is the wettest month on record. This took place before official Government observations began. Precipitation records at that time were kept by two physicians, Dr. F.M. Hatch, a retired Army Surgeon, and his associate, Dr. T.M. Logan. Their records are believed to be reliable.

The most rainfall ever recorded in one season in Sacramento is 37.49 inches, set during the 1982-83 rainy season. This followed the wet season of 1981-82 (32.65 inches), making it the wettest two-year period in Sacramento on record.

Sacramento's maximum wind speed of 70 mph occurred on two separate occasions; December 7, 1952, and November 13, 1953. Both wind storms occurred during the passages of Pacific weather fronts and were accompanied by rain. (Both wind speed records are the recorded "fastest mile", or a one-minute observed wind speed taken from a multiple register with a time-record of the passing of each mile of wind. Further explanations of wind velocities are found later in this publication).

The most persistent case of dense fog at the Sacramento Executive Airport was 17 consecutive days, occurring December 12 through December 28, 1985. This long and gloomy period of dense fog broke the record of 13 consecutive days, set in January 1975. (Fog is considered dense when it restricts visibility to a quarter-mile or less during any part of the day.)

II. TEMPERATURE RECORDS

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - JANUARY 1996

MONTH: January

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min	Year
1	65	1887	38	1920	54	1914	24	1919
2	65	1940	36	1961*	52	1940*	25	1961
3	63	1913	37	1961*	53	1900	26	1950
4	63	1963*	37	1961*	53	1948	25	1949
5	67	1948	33	1961*	55	1986	26	1949
6	71	1911	35	1961	53	1948	24	1950
7	65	1943	36	1968	54	1948	24	1937
8	66	1990*	37	1968	57	1953	22	1937
9	70	1990	37	1926*	58	1953	22	1937
10	66	1996*	35	1926	57	1959	25	1949
11	67	1959*	35	1929*	54	1959	22	1949
12	69	1980	36	1929*	56	1980	28	1949
13	64	1981*	35	1926	59	1980	27	1963
14	65	1980	35	1929	56	1909	19	1888
15	67	1981*	37	1903*	55	1909	19	1888
16	68	1991	39	1888	56	1909	24	1888*
17	69	1986	40	1982	54	1986*	22	1888
18	70	1976	40	1922	56	1896	25	1888
19	71	1991	41	1961	53	1953	27	1922*
20	69	1976	36	1937	55	1969	22	1883
21	70	1976	34	1962	57	1970	22	1937
22	66	1991*	40	1992*	59	1970	24	1937
23	69	1948	39	1992	54	1970	27	1937
24	70	1984*	39	1893	54	1903	28	1949
25	70	1934	40	1893	53	1886	24	1937
26	70	1899	40	1963	54	1942*	28	1949
27	68	1988*	40	1963	51	1925	27	1957
28	70	1984	43	1977*	53	1995	29	1898*
29	70	1976	40	1922	56	1967	25	1880
30	73	1976	40	1922	56	1967	28	1957
31	74	1976	44	1978*	55	1963	30	1950*
Month	74	1976	33	1961*	59	1980*	19	1888*

* Also occurred on earlier dates or years.

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - FEBRUARY 1996

MONTH: February

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min	Year
1	74	1976	42	1932	58	1963	28	1950
2	76	1976	42	1883	56	1963	26	1950
3	71	1992	40	1883	56	1963*	22	1883
4	72	1984	42	1899	57	1996	23	1883
5	70	1996	42	1989*	58	1996	24	1989
6	73	1996*	43	1949	55	1963	24	1989
7	70	1987	44	1929*	54	1960*	23	1989
8	70	1988	43	1901	55	1975	23	1989
9	70	1988	43	1989	53	1992*	28	1891*
10	74	1988	44	1939	55	1996*	29	1933*
11	75	1988	44	1894*	54	1970	30	1884
12	74	1996*	45	1884	56	1879	25	1884
13	74	1971	46	1884	54	1996*	21	1884
14	76	1930	44	1911	56	1986*	27	1884
15	76	1977	42	1884	57	1982	30	1990
16	76	1977	47	1990	55	1982*	30	1883
17	76	1977	45	1990*	57	1996	30	1880
18	80	1899	46	1890*	56	1980	31	1990*
19	77	1964*	44	1897	54	1968	31	1882
20	75	1995	46	1909*	56	1968	31	1953*
21	75	1995*	42	1913	56	1968	31	1955
22	78	1985	48	1951*	56	1904	33	1920
23	79	1991	48	1890	58	1968	32	1890
24	77	1991	48	1930*	55	1957	35	1960*
25	77	1992*	49	1887	55	1957*	30	1887
26	77	1992	44	1962	55	1957	30	1962
27	80	1985	44	1911	54	1980*	30	1962
28	79	1985	49	1951*	55	1976	33	1955*
29	73	1924	54	1920*	53	1992	36	1888
Month	80	1985*	40	1883	58	1968*	21	1884

* Also occurred on earlier dates or years.

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - MARCH 1996

MONTH: March

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min	Year
1	76	1936	49	1911	55	1986*	32	1971
2	79	1994	45	1976	54	1983	32	1953
3	80	1929	47	1894	55	1905*	31	1951
4	78	1986*	46	1951	55	1884	33	1939*
5	82	1986	49	1908	56	1884	33	1880
6	80	1953	47	1952*	56	1892	32	1918
7	81	1953	48	1918	58	1986	32	1964
8	80	1953	50	1939*	57	1989	34	1985
9	78	1892	49	1939	58	1983	34	1882
10	78	1892	48	1922	58	1983	34	1951
11	81	1934	47	1922	56	1916	34	1922
12	80	1934	47	1969	56	1972	31	1950
13	81	1994	50	1919	56	1900	33	1954
14	81	1994*	46	1942	56	1970	32	1942
15	82	1972	49	1906	56	1878	29	1880
16	86	1972	48	1945	60	1914	31	1898
17	84	1996	49	1886	60	1914	35	1955
18	82	1914	52	1954*	55	1914	34	1945*
19	80	1996*	50	1937	60	1914	35	1898
20	84	1960	50	1946*	56	1984	33	1952
21	82	1990*	48	1973	58	1891	35	1952
22	82	1915*	46	1964	56	1978	34	1987
23	80	1984*	47	1913	56	1896	30	1898
24	81	1925	50	1991*	60	1896	34	1945*
25	84	1988	48	1907	60	1896	34	1936
26	90	1988	48	1991	57	1992	32	1898
27	85	1923	52	1884	59	1882	32	1898
28	84	1986	53	1905*	57	1986*	37	1892
29	83	1968	51	1914*	59	1918	36	1897
30	86	1966	51	1925*	59	1881	34	1938
31	90	1966	50	1982	57	1885	37	1936
Month	90	1988*	45	1976	60	1914*	29	1880

* Also occurred on earlier dates or years.

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - APRIL 1995

MONTH: April

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min	Year
1	90	1966	52	1982	56	1966	36	1936
2	88	1985*	52	1958	56	1966	37	1955
3	89	1966	53	1928*	58	1961	36	1955
4	86	1960	52	1938*	60	1961	35	1901
5	88	1985	50	1929	57	1934	36	1929
6	91	1989	55	1929*	57	1939	34	1929
7	91	1989	54	1893	60	1878	36	1929
8	91	1989	54	1965	63	1878	34	1953
9	95	1989	52	1965	60	1989*	34	1929
10	93	1988	52	1912	60	1885	34	1927
11	95	1988	51	1956	62	1904	37	1953
12	89	1990*	50	1922	58	1932*	36	1912
13	95	1990	50	1956	60	1897	37	1945
14	94	1985	52	1920	59	1897	36	1921
15	92	1987	51	1880	61	1925	36	1896
16	92	1987	55	1880	62	1897	36	1917
17	90	1954	55	1955*	58	1992	36	1933
18	91	1939	54	1967	62	1907	38	1933
19	91	1939	53	1988*	64	1907	39	1933
20	92	1931	49	1963	60	1907	38	1904
21	96	1931	54	1967	62	1931*	36	1963*
22	92	1984	54	1980	60	1895	39	1920
23	92	1946	54	1924	62	1910	39	1920
24	94	1946	57	1951*	59	1945	38	1964
25	92	1987	54	1952	61	1966	40	1891
26	94	1987	54	1911	63	1926	39	1892
27	96	1987	56	1904*	62	1965*	38	1955
28	94	1992*	56	1948*	61	1992	40	1970*
29	96	1981	53	1948	63	1981	39	1948
30	96	1981	54	1938	62	1981	39	1933
Month	96	1987*	49	1963	64	1907	34	1953*

* Also occurred on earlier dates or years.

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - MAY 1995

MONTH: May

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min	Year
1	95	1947	56	1915	64	1947	39	1920
2	96	1992	56	1950	61	1947	40	1964
3	97	1992	55	1892	64	1990	37	1950
4	100	1990	56	1892	65	1989	42	1952*
5	100	1987	57	1964	67	1878	42	1988
6	104	1987	57	1994	67	1987	39	1933
7	105	1987	54	1905	68	1987	37	1916
8	96	1984	55	1963	70	1987	40	1933
9	96	1987	57	1922	67	1987	39	1896
10	100	1987	58	1887	67	1897	41	1933
11	102	1987	58	1880	68	1897	40	1930
12	102	1987	55	1880	66	1976*	39	1880
13	102	1976	58	1968	70	1987	40	1882
14	103	1987	58	1894	67	1987	41	1899
15	99	1927	58	1911	68	1910	40	1906
16	102	1970	61	1898*	69	1970	40	1894
17	100	1973	60	1911	67	1970	43	1883
18	98	1920	58	1991	63	1886*	42	1917
19	98	1947	60	1948	66	1920	41	1896
20	102	1947	56	1957*	67	1931	44	1901
21	100	1988	61	1933	69	1892	45	1960*
22	100	1967	60	1977	70	1943	42	1960
23	98	1936	57	1960	69	1943	45	1916
24	98	1982*	58	1916	72	1890	43	1953
25	100	1951	58	1917	68	1883	43	1899
26	102	1974	63	1906	69	1951*	42	1918
27	104	1984	56	1906	67	1984	45	1927
28	107	1984	60	1971*	72	1887	44	1927
29	101	1973	63	1911	71	1973	44	1985
30	103	1910	61	1932	68	1969	44	1898
31	100	1910	58	1899	67	1910*	45	1923
Month	107	1984	54	1905	72	1890*	37	1950*

* Also occurred on earlier dates or years.

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - JUNE 1995

MONTH: June

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min	Year
1	104	1970	62	1967*	69	1960	43	1929
2	106	1960	59	1967	71	1960	45	1933*
3	107	1960	64	1936	71	1893	46	1944
4	103	1935*	66	1984*	70	1981*	46	1939
5	108	1926	60	1967	71	1883	47	1988*
6	105	1978	57	1914	73	1974	46	1988
7	102	1883	64	1927	73	1903	44	1950
8	103	1973	57	1964	71	1973	46	1892
9	102	1986*	59	1964	74	1883	46	1892
10	105	1918	67	1955	72	1921	46	1917
11	107	1985*	64	1907	72	1985	48	1901
12	105	1985	62	1884	68	1960	44	1952
13	107	1985	60	1907	67	1966	48	1952*
14	109	1961	65	1944	75	1966	47	1907
15	111	1961	62	1944	71	1961	47	1944
16	108	1985	68	1929*	73	1985	47	1919
17	102	1976	66	1909	68	1922	48	1910
18	105	1945*	68	1909	70	1981*	48	1891
19	106	1988*	65	1930	76	1917	50	1908
20	108	1920	63	1908	74	1981	46	1910
21	108	1961	68	1907	74	1981	46	1908
22	107	1981	65	1923	74	1981	48	1943
23	106	1988	59	1912	78	1909	50	1930
24	110	1925	64	1899	74	1976	49	1918
25	111	1925	68	1906	74	1995*	48	1901
26	106	1973*	61	1906	74	1995	48	1930
27	108	1976	65	1889	73	1973	49	1906
28	108	1976	65	1991	74	1891	47	1916
29	107	1950	74	1952	75	1891	50	1949
30	112	1934	71	1982	74	1891	49	1881
Month	112	1934	57	1964*	78	1909	43	1929

* Also occurred on earlier dates or years.

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - JULY 1995

MONTH: July

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min	Year
1	108	1950	71	1916	72	1891	50	1919
2	109	1991*	68	1938	73	1991	50	1919
3	111	1991	65	1910	74	1970	47	1901
4	110	1991	68	1948*	75	1931	50	1919
5	107	1931	71	1915	72	1931	50	1919
6	105	1989	76	1935	71	1957	50	1899
7	110	1989	73	1891	74	1905	51	1899
8	110	1905	68	1974	74	1905*	51	1930
9	108	1985	73	1904	72	1896	51	1888
10	107	1988*	72	1892*	72	1896	50	1932*
11	110	1961	75	1914*	76	1913	50	1898
12	111	1990	71	1956	74	1990	49	1899
13	112	1972	71	1920	75	1990	50	1903
14	113	1972	75	1907	77	1972	50	1918
15	109	1926	74	1975	74	1984*	51	1894
16	108	1935	74	1923	73	1886	51	1887
17	114	1925	75	1987	75	1988	48	1887
18	112	1988	69	1932	72	1988*	50	1921
19	109	1936	72	1907	71	1961	49	1887
20	107	1933	74	1985*	75	1917	50	1887
21	106	1990*	74	1987*	73	1936	50	1887
22	105	1941*	75	1913	71	1939	52	1903*
23	107	1942	77	1903	70	1956*	50	1889
24	108	1985*	78	1977	73	1974	52	1922
25	109	1975	74	1913	77	1974	52	1919
26	110	1933	74	1941*	72	1973	51	1905
27	108	1980*	74	1941	72	1933	50	1899
28	107	1954	70	1919	74	1967	50	1930
29	105	1988*	75	1985	69	1967	51	1887
30	109	1977	68	1966	70	1980*	50	1919
31	105	1995	74	1933*	74	1980	51	1919
Month	114	1925	65	1910	77	1974*	47	1901

* Also occurred on earlier dates or years.

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - AUGUST 1995

MONTH: August

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min	Year
1	109	1993	76	1933	74	1977*	50	1887
2	108	1987	69	1953	76	1993	50	1887
3	107	1987*	73	1953*	71	1885	51	1919
4	106	1966	70	1950	68	1885	50	1897
5	109	1990	78	1962*	69	1978	50	1950
6	108	1978	77	1906*	76	1961	50	1891
7	108	1913	75	1907	76	1983	50	1931
8	110	1990	74	1916	71	1990*	50	1919
9	109	1990	72	1949	75	1990	50	1931
10	108	1971	75	1916	71	1992	50	1919
11	110	1898	72	1965	72	1935*	49	1910
12	106	1898	73	1988	73	1898	50	1910
13	111	1933	73	1968*	70	1983*	48	1921
14	107	1920	70	1976	73	1933*	49	1887
15	108	1920	72	1918	74	1983*	51	1955
16	107	1992	75	1918	73	1983	50	1955
17	106	1967*	71	1899	74	1966	51	1917
18	107	1950	68	1975	70	1883	51	1985
19	108	1950	73	1968	69	1950	51	1890
20	106	1950	72	1959	69	1950	48	1914
21	102	1982*	72	1922	68	1969	49	1910
22	106	1891	72	1901	67	1982	50	1901
23	109	1913	74	1963*	74	1891	50	1908
24	108	1931	76	1990*	73	1913	50	1887
25	105	1988	68	1920	69	1931	52	1887
26	106	1988*	73	1975	74	1988*	50	1929
27	108	1894	75	1975	73	1894	51	1952*
28	105	1915	67	1895	74	1913	50	1910
29	108	1987	69	1895	71	1977	49	1880
30	110	1987	70	1914	70	1988	48	1887
31	108	1976	66	1964	68	1972	51	1914*
Month	111	1933	66	1964	76	1993*	48	1921*

* Also occurred on earlier dates or years.

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - SEPTEMBER 1995

MONTH: September

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min.	Year
1	109	1950	69	1898	67	1976	48	1899
2	109	1955	70	1913	72	1950	49	1898
3	108	1955	68	1912	71	1950	50	1895
4	108	1988	67	1900	72	1950	47	1914
5	108	1988	70	1912	72	1988	50	1920
6	105	1923	62	1912	72	1923	49	1900
7	107	1923	67	1920	72	1969	50	1935*
8	107	1944	64	1920	73	1944	47	1914
9	108	1944	64	1978	73	1944	45	1898
10	105	1888	67	1952	67	1953*	46	1985
11	106	1888	70	1893	70	1888	49	1911
12	104	1983	64	1895	69	1953	44	1893
13	104	1971	67	1939	70	1983*	45	1910
14	104	1979	68	1931	71	1953	46	1939
15	104	1979*	69	1977	69	1922	47	1939
16	105	1979	60	1977	69	1922*	48	1960
17	106	1984	63	1921	71	1923	48	1892
18	104	1984	65	1989	77	1984	44	1882
19	101	1936	62	1896	72	1939	46	1947*
20	101	1994*	68	1945*	72	1939	48	1986*
21	103	1987	66	1901	73	1939	48	1960
22	102	1949	60	1917	74	1939	46	1895
23	102	1939	61	1901	70	1939	46	1945
24	102	1936	66	1986*	66	1982*	45	1920
25	100	1952	62	1909	66	1991*	44	1934
26	103	1963	64	1986	70	1952	46	1923
27	102	1963	64	1965	67	1963	46	1986
28	100	1966	63	1919	67	1966	46	1986*
29	103	1966*	62	1919*	68	1966	48	1955
30	102	1991	58	1930*	66	1988	46	1894
Month	109	1955*	58	1930*	77	1984	44	1934*

* Also occurred on earlier dates or years.

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - OCTOBER 1995

MONTH: October

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min	Year
1	101	1980	56	1909	63	1980*	43	1950
2	102	1980*	61	1916	64	1980*	44	1903
3	102	1987*	58	1909	66	1980	42	1884
4	102	1987*	61	1900	68	1980	42	1881
5	102	1987	56	1924	66	1933	42	1916
6	102	1987	60	1882	62	1987*	44	1913
7	100	1980	60	1973	65	1976	41	1881
8	97	1980	62	1922	64	1899	42	1881
9	96	1980	63	1924*	70	1899	43	1930
10	100	1991	57	1924	64	1991*	44	1941
11	96	1992*	57	1925	66	1991	40	1886
12	97	1991	55	1899	64	1991	42	1924
13	94	1991	50	1899	62	1991*	40	1879
14	98	1991	56	1878	63	1979	36	1881
15	94	1961	57	1938	64	1991*	38	1881
16	95	1961	49	1984	61	1933	41	1984*
17	96	1988	60	1892	61	1974	38	1984*
18	94	1988	59	1984	60	1988	39	1905
19	91	1991*	55	1908	59	1991	43	1949*
20	92	1991*	58	1961*	62	1940	37	1949*
21	90	1929	59	1985	60	1982*	38	1886
22	89	1988*	56	1897	62	1982	40	1914
23	90	1965	56	1897	62	1982	40	1885
24	91	1959	57	1962	60	1959	37	1956
25	89	1965	57	1919	61	1917	40	1900
26	88	1993*	58	1883	60	1901	39	1939
27	86	1906	56	1922	60	1987	40	1921
28	88	1983	57	1971	60	1987	34	1946
29	84	1965	59	1924*	60	1983	37	1916
30	84	1993*	50	1886	61	1983	34	1935
31	86	1966	56	1886	61	1983	38	1971*
Month	102	1987*	49	1984	70	1899	34	1946*

* Also occurred on earlier dates or years.

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - NOVEMBER 1995

MONTH: November

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min	Year
1	86	1966	50	1935	60	1992	34	1886
2	86	1966	53	1935	57	1988*	36	1936
3	85	1976	52	1935	58	1988*	35	1935
4	84	1980	52	1918	58	1941	30	1935
5	85	1976	52	1973	59	1891	34	1935
6	84	1976	53	1922	56	1913	35	1920
7	83	1931	53	1920	58	1973	36	1897
8	82	1955	53	1942*	58	1970*	34	1897
9	83	1976*	50	1982	57	1976*	36	1920
10	80	1990*	47	1920	59	1976	35	1946
11	79	1990	46	1985	56	1976*	31	1911
12	81	1990	49	1985*	57	1981	30	1938
13	78	1995	46	1955	56	1981*	30	1985*
14	78	1995	48	1982	57	1981	30	1916
15	80	1923	48	1994*	59	1981	29	1880
16	76	1995*	46	1982*	58	1981	32	1880
17	84	1932	48	1881	56	1966*	30	1958
18	78	1932	52	1946	57	1950	32	1881
19	77	1932	47	1922	58	1966	30	1985
20	78	1932	45	1985	62	1950	30	1985
21	74	1936	49	1977	59	1903	31	1985*
22	75	1959	48	1918*	57	1981*	30	1880
23	80	1930	45	1985	58	1981*	28	1931
24	73	1959	44	1985	56	1909	30	1931
25	75	1995*	44	1908	54	1970	30	1880
26	76	1923	46	1931	55	1901	29	1883
27	72	1959	45	1960	53	1923*	28	1887
28	71	1932	45	1880	58	1932	27	1880
29	71	1929	47	1905	56	1901	31	1952
30	71	1995	46	1919	55	1926	30	1880
Month	86	1966	44	1985*	62	1950	27	1880

* Also occurred on earlier dates or years.

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - DECEMBER 1995

MONTH: December

Date	High Max	Year	Low Max	Year	High Min	Year	Low Min	Year
1	71	1959	44	1972	54	1966	32	1929
2	69	1959	44	1972	56	1941	30	1906
3	71	1958	43	1971	55	1901	32	1918
4	71	1958	43	1909	54	1995	29	1909
5	72	1979	44	1963	55	1995	32	1972
6	70	1989	43	1948*	55	1995	29	1891
7	68	1979*	42	1965	53	1995*	28	1891
8	71	1988*	38	1972	55	1950	27	1972
9	69	1893	37	1972	58	1939	23	1932
10	68	1958	35	1932	57	1937	22	1932
11	71	1958	34	1932	54	1937	17	1932
12	71	1958	38	1972	56	1969*	21	1932
13	71	1988	42	1961	56	1929	23	1932
14	69	1958	32	1972	56	1981	23	1940
15	72	1958	36	1972	56	1929	26	1932
16	70	1958	40	1890	54	1962	26	1892
17	69	1958	40	1890	52	1877	28	1928
18	68	1958	40	1963	52	1884	28	1924
19	66	1929	37	1908	54	1981	25	1924
20	66	1981	36	1908	57	1969	27	1928
21	63	1969	34	1990	57	1964	22	1990
22	65	1914	35	1928	58	1964	18	1990
23	66	1964	32	1928	58	1964	21	1990
24	66	1964*	38	1899	56	1884	23	1990
25	64	1967	38	1992*	55	1964	26	1891
26	65	1967	37	1899	55	1892*	25	1879
27	68	1953	37	1988	52	1945*	27	1878
28	72	1967	37	1899	54	1973	26	1930
29	66	1989*	38	1908	52	1945	24	1878
30	60	1970*	38	1929*	53	1886	28	1990*
31	61	1979*	37	1882	54	1979	24	1915
Month	72	1979*	32	1972*	58	1964*	17	1932

* Also occurred on earlier dates or years.

HIGHEST AND LOWEST DAILY MAXIMUM TEMPERATURES
BY MONTHS
WITH DATE AND YEAR OF OCCURRENCE

July 1877-March 1996

Highest Daily Max

Month	Temp	Date	Year	Normal* for Date
January	74	31	1976	58
February	80	27	1985**	64
March	90	26	1988**	68
April	96	27	1987**	76
May	107	28	1984	84
June	112	30	1934	91
July	114	17	1925	94
August	111	13	1933	92
September	109	2	1955**	90
October	102	6	1987**	83
November	86	2	1966	70
December	72	5	1979**	69

Lowest Daily Max

Month	Temp	Date	Year	Normal* for Date
January	33	5	1961**	52
February	40	3	1883	59
March	45	2	1976	64
April	49	20	1963	74
May	54	7	1905	79
June	57	8	1964**	86
July	65	3	1910	92
August	66	31	1964	90
September	58	30	1930**	84
October	49	16	1984	79
November	44	24	1985**	60
December	32	14	1972**	54

* Climatological Standard Normals 1961-1990
** Also occurred on earlier dates or years.

HIGHEST AND LOWEST DAILY MINIMUM TEMPERATURES
BY MONTHS
WITH DATE AND YEAR OF OCCURRENCE

July 1877-March 1996

Highest Daily Min

Month	Temp	Date	Year	Normal* for Date
January	59	13	1980**	40
February	58	23	1968**	45
March	60	19	1914**	46
April	64	19	1907	49
May	72	24	1890**	55
June	78	23	1909	59
July	77	25	1974**	61
August	76	07	1983**	61
September	77	18	1984	58
October	70	09	1899	55
November	62	20	1950	45
December	58	23	1964**	39

Lowest Daily Min

Month	Temp	Date	Year	Normal* for Date
January	19	15	1888**	40
February	21	13	1884	44
March	29	15	1880	46
April	34	08	1953**	48
May	37	03	1950**	51
June	43	01	1929	56
July	47	03	1901	60
August	48	13	1921**	60
September	44	25	1934**	57
October	34	28	1946**	50
November	27	28	1880	43
December	17	11	1932	41

* Climatological Standard Normals 1961-1990
** Also occurred on earlier dates or years.

HIGHEST AND LOWEST AVERAGE MAXIMUM TEMPERATURE BY MONTHS
WITH YEAR OF OCCURRENCE (July 1877-March 1996)

Month	Normal* Monthly Maximum	Highest Average Maximum	Year	Lowest Average Maximum	Year
January	54.1	62.1	1976	45.9	1937
February	61.7	68.1	1991	52.5	1887
March	66.1	73.2	1934	56.7	1897
April	72.8	80.8	1987	60.2	1967
May	80.9	89.7	1992	68.6	1915
June	88.1	94.6	1985	76.3	1884
July	93.4	99.6	1988	84.4	1903
August	92.1	97.8	1967	81.9	1899
September	87.7	94.0	1984	78.1	1911
October	78.5	84.8	1991	68.6	1882
November	63.7	72.7	1995	57.8	1882
December	54.0	68.0	1958	47.0	1924

HIGHEST AND LOWEST AVERAGE MINIMUM TEMPERATURE BY MONTHS
WITH YEAR OF OCCURRENCE (July 1877-March 1996)

Month	Normal* Monthly Minimum	Highest Average Minimum	Year	Lowest Average Minimum	Year
January	40.1	48.0	1995	30.4	1949
February	44.0	49.1	1963	36.4	1880
March	46.0	50.9	1978	38.9	1880
April	48.7	53.9	1926	42.3	1929
May	53.4	57.8	1992	47.2	1899
June	57.9	63.8	1981	52.1	1910
July	60.4	63.5	1988	54.3	1887
August	60.3	63.6	1983	53.5	1911
September	58.3	62.0	1979	52.0	1910
October	53.1	56.7	1992	46.2	1916
November	46.0	50.4	1995**	38.0	1880
December	40.2	46.6	1950	33.4	1932

* Climatological Normals from the years 1961-1990.
** Also occurred earlier years.

HIGHEST AND LOWEST MONTHLY AVERAGE TEMPERATURES
(July 1877-March 1996)

		Highest Monthly Average Temperature		Lowest Monthly Average Temperature	
	Normal*	Temp	Year	Temp	Year
JANUARY	47.1	53.2	1995	38.7	1937
		52.6	1986	40.6	1922
		51.8	1953	41.2	1929
		51.7	1970	41.8	1883
		51.5	1976	42.0	1898,1926
FEBRUARY	52.9	57.6	1963,1991	44.9	1887
		56.9	1992	45.5	1903
		56.0	1996	45.7	1880
		55.9	1968, 1986	46.6	1949
		55.6	1981	46.9	1911
MARCH	56.1	61.5	1934	49.2	1880
		61.0	1993	49.4	1897
		60.9	1986	50.4	1935
		60.6	1972,1984	50.8	1917,22,45,48
		60.4	1885	50.9	1907
APRIL	60.8	66.0	1966	52.2	1967
		65.9	1992	53.3	1896
		65.8	1987	54.0	1929
		65.7	1990	54.3	1912
		64.4	1934	54.7	1948
MAY	67.2	73.8	1992	58.2	1934
		73.0	1984	59.3	1899
		71.6	1976	59.6	1933
		71.3	1987	59.8	1911,16,17
		70.2	1973	60.0	1896
JUNE	73.0	79.2	1981	64.8	1894
		77.5	1985	65.9	1923
		76.4	1974	66.2	1952
		76.0	1918	66.4	1907,1910
		75.8	1957,1973	66.5	1906

*Monthly Normals based on Climatological Normals 1961-1990.

HIGHEST AND LOWEST MONTHLY AVERAGE TEMPERATURES
(July 1877-March 1996)

		Highest Monthly Average Temperature		Lowest Monthly Average Temperature	
	Normal*	Temp	Year	Temp	Year
JULY	76.9	81.6	1988	69.4	1903
		80.7	1984	70.2	1887
		79.5	1931	70.7	1907
		79.0	1990	71.0	1914
		78.9	1985	71.2	1904
AUGUST	76.2	79.9	1967	68.0	1899
		79.6	1969	68.8	1911
		79.4	1992	69.8	1887
		79.0	1958,1966	70.2	1900
		78.3	1994	70.4	1881
SEPTEMBER	73.0	77.3	1979	65.4	1893
		77.2	1984	65.5	1911
		76.9	1991	65.6	1930
		76.5	1974	66.0	1907
		75.8	1990	66.4	1925
OCTOBER	65.8	70.7	1991	57.6	1881
		70.1	1976	58.2	1916
		69.5	1983,1987	58.6	1920
		69.0	1988,1992	58.8	1882,1886
		68.9	1990	59.0	1883
NOVEMBER	54.9	61.6	1995	49.3	1880
		59.2	1976	49.6	1882
		59.0	1932	49.8	1994*
		58.6	1926	50.2	1881
		58.5	1923	50.4	1985
DECEMBER	47.1	52.6	1958	41.5	1932
		52.3	1995	42.1	1908
		51.3	1976	42.2	1924
		51.1	1969	42.5	1963
		51.0	1964	42.6	1985

*Monthly Normals based on Climatological Normals 1961-1990.

WARMEST AND COLDEST
WINTER, SPRING, SUMMER, FALL
(December 1877 - March 1996)

WINTER
(December - February)
Average = 49.0*

Warmest		Coldest	
Temp	Year	Temp	Year
52.7	1995-96	43.1	1948-49
52.6	1969-70	43.6	1932-33
52.2	1979-80	44.0	1936-37
52.1	1975-76	44.1	1879-80
51.7	1980-81	44.9	1928-29
51.4	1994-95	45.1	1909-10
51.2	1940-41	45.2	1954-55
51.1	1977-78	45.2	1882-83
51.1	1958-59	45.3	1902-03
50.8	1880-81	45.5	1916-17

SPRING
(March - May)
Average = 61.4*

Warmest		Coldest	
Temp	Year	Temp	Year
66.4	1992	55.4	1880
65.0	1984	55.5	1948
64.7	1934	56.1	1917
64.0	1987	56.2	1902
63.9	1966	56.2	1896
63.6	1931	56.4	1912
63.5	1993	56.7	1963
63.4	1994	57.0	1911
63.4	1990	57.1	1893
63.2	1981	57.2	1906
63.2	1976	57.2	1899

*Averages based on Climatological Normals 1961-1990

WARMEST AND COLDEST
WINTER, SPRING, SUMMER, FALL
(December 1877 - March 1996)

SUMMER
(June - August)
Average = 75.4*

Warmest		Coldest	
Temp	Year	Temp	Year
77.8	1981	69.3	1970
77.5	1988	69.6	1911
77.4	1974	69.8	1914
77.0	1990	70.2	1910
77.0	1984	70.3	1887
76.9	1985	70.4	1899
76.7	1992	70.5	1905
76.4	1994	70.5	1881
76.4	1976	70.5	1880
76.4	1961	70.6	1909

FALL
(September - November)
Average = 64.6*

Warmest		Coldest	
Temp	Year	Temp	Year
68.5	1991	58.9	1881
68.3	1995	59.0	1920
68.2	1976	59.4	1882
66.9	1990	59.6	1916
66.7	1992	59.7	1893
66.7	1974	60.1	1931
66.6	1979	60.1	1886
66.5	1983	60.3	1911
66.4	1988	60.3	1880
66.4	1966	60.4	1897
66.4	1958		

*Averages based on Climatological Normals 1960-1991

HIGHEST AND LOWEST ANNUAL TEMPERATURE
(1878-1995)

Highest Annual Average		Lowest Annual Average	
Temp	Year	Temp	Year
65.1	1976	58.1	1880
64.8	1992	58.4	1911
64.7	1981	58.8	1893
64.5	1995	59.2	1902
63.8	1967, 1984	59.3	1912
63.7	1986	59.3	1919

Average Annual
Temperature
62.6

Averages based on Climatological Normals 1961-1990

RECORD NUMBER OF DAYS PER YEAR WITH MAXIMUM TEMPERATURES 90, 100 and 105 DEGREES OR HIGHER (1878-1995)

90 or Higher[1]		100 or Higher[2]		105 or Higher[3]	
Days	Year	Days	Year	Days	Year
110	1984	41	1988	18	1988
104	1992	38	1984	14	1984
104	1988	33	1987	13	1990
103	1974	30	1936	11	1985, 1961, 1950
95	1967	27	1981	9	1987, 1931
94	1970	26	1985	8	1933
92	1981, 1966	24	1967, 1966	6	1972, 1966, 1960,
91	1987	23	1976, 1969, 1950,		1935, 1934
89	1991, 1990, 1969		1931, 1929	5	1995, 1981, 1978,
87	1936	22	1990, 1979. 1961		1976, 1936,1929,
86	1986	21	1995, 1992, 1970,		1925, 1923, 1891
84	1979		1960, 1939		
83	1985	20	1993, 1986, 1933,		
82	1993, 1945		1888		
81	1976				
80	1975, 1952, 1939				

AVERAGE NUMBER OF DAYS PER YEAR WITH MAXIMUM TEMPERATURES 90, 100 AND 105 DEGREES OR HIGHER

90 Degrees or higher . . . . . 82 days
100 Degrees or higher . . . . . 19 days
105 Degrees or higher . . . . . 4 days

[1] Only years with 80 or more days tabulated
[2] Only years with 20 or more days tabulated
[3] Only years with 5 or more days tabulated

GREATEST NUMBER OF CONSECUTIVE DAYS WITH
MAXIMUM TEMPERATURES
90 DEGREES OR HIGHER
(July 1877-March 1996)

Days	Period	Year	Days	Period	Year
40	July 13-August 21	1992	19	July 26-August 13	1990
35	July 24-August 27	1967	18	August 22-September 8	1988
29	June 22-July 20	1984	18	June 23-July 10	1985
25	July 17-August 10	1974	18	July 19-August 5	1945
24	July 25-August 17	1969	18	June 19-July 6	1929
23	July 26-August 17	1983	17	July 6-22	1990
22	June 15-July 6	1981	17	June 17-July 3	1988
22	July 7-28	1961	17	July 29-August 14	1986
21	July 12-August 1	1988	17	July 26-August 11	1978
21	July 29-August 18	1971	17	July 1-17	1953
21	July 29-August 18	1920	17	July 9-25	1917
20	July 15-August 3	1959	16	July 19-August 3	1980
20	September 8-27	1899	16	July 28-August 12	1955
19	August 2-20	1994	16	July 12-27	1891
19	August 27-September 14	1948	16	June 29-July 14	1882

Only periods with 16 or more days tabulated.

GREATEST NUMBER OF DAYS WITH MAXIMUM TEMPERATURES
90 DEGREES OR HIGHER IN ONE MONTH
(Non-consecutive Days)

Days	Period	Days	Period
30	August 1967	27	August 1931
29	August 1994	27	July 1970
29	July 1988	27	August 1958
28	July 1969	26	August 1992
28	July 1967	26	July 1984
28	July 1953	26	July 1981
28	August 1969	26	August 1966
27	August 1985	26	July 1959

Only months with 26 or more days tabulated.

GREATEST NUMBER OF CONSECUTIVE DAYS WITH MAXIMUM TEMPERATURES 100 DEGREES OR HIGHER (July 1877-March 1996)

Days	Period	Year	Days	Period	Year
9	July 10-18	1984	6	August 28-September 2	1976
9	June 19-27	1981	6	July 16-21	1960
9	August 1-9	1966	6	June 28-July 3	1950
8	August 4-11	1990	6	September 5-10	1944
8	June 9-16	1985	6	August 3-8	1936
7	July 21-27	1980	6	September 19-24	1936
7	August 12-18	1967	6	September 4-9	1923
7	June 20-26	1929	6	June 15-20	1917
7	June 29-July 5	1929	6	July 4-9	1905
7	August 10-16	1920	6	July 25-30	1898
6	August 15-20	1992	6	August 9-14	1898
6	July 30-August 4	1986	6	September 6-11	1888
6	July 1-6	1985			

Only periods with 6 or more days tabulated.

GREATEST NUMBER OF DAYS WITH MAXIMUM TEMPERATURES 100 DEGREES OR HIGHER IN ONE MONTH (Non-consecutive days)

Days	Period	Days	Period
17	July 1988	12	August 1966
16	July 1984	11	July 1980
16	July 1931	11	July 1979
14	August 1969	11	July 1933
13	July 1985	10	August 1988
13	August 1992	10	July 1936
12	June 1981	10	June 1985
12	August 1967		

Only months with 10 more days tabulated.

GREATEST NUMBER OF CONSECUTIVE DAYS WITH
MAXIMUM TEMPERATURES
105 DEGREES OR HIGHER
(July 1877-March 1996)

Days	Period	Year	Days	Period	Year
7	August 5-11	1990	3	July 24-26	1975
6	June 11-16	1985	3	June 14-16	1961
5	August 11-16	1920	3	July 17-19	1961
4	July 16-19	1988	3	July 19-21	1960
4	July 1-4	1984	3	June 23-25	1957
4	July 12-15	1972	3	September 2-4	1955
4	June 29-July 2	1950	3	August 18-20	1950
4	September 1-4	1950	3	July 27-29	1943
4	June 29-July 2	1934	3	July 15-17	1935
4	August 10-13	1898	3	July 25-27	1933
3	July 2-4	1991	3	August 11-13	1933
3	July 8-10	1988	3	July 3-5	1931
3	September 3-5	1988	3	June 23-25	1929
3	August 7-9	1984	3	July 14-16	1926
3	July 25-27	1980	3	June 24-26	1925
3	August 30-September 1	1976	3	September 6-8	1923

Only periods with 3 or more days tabulated.

GREATEST NUMBER OF DAYS WITH MAXIMUM TEMPERATURES
105 DEGREES OR HIGHER IN ONE MONTH
(Non-consecutive days)

Days	Period	Days	Period
10	July 1988	5	July 1933
7	August 1990	5	August 1923
7	July 1984	5	August 1920
7	July 1931	4	August 1978
6	June 1985	4	July 1972
6	June 1961	4	July 1960
6	July 1985	4	September 1950
5	August 1987	4	July 1935
5	August 1966	4	August 1913
5	July 1961	4	August 1898

Only months with 4 or more days tabulated.

AVERAGE NUMBER OF DAYS PER MONTH WITH
MAXIMUM TEMPERATURES
90, 100 AND 105 DEGREES OR HIGHER
(1961 - 1960)

Month	90 or above	100 or above	105 or above
April	1	0	0
May	7	1	*
June	13	4	1
July	22	7	2
August	20	5	1
September	13	2	*
October	3	*	0
Annual Average	79 Days	19 Days	4 Days

* Less than one day

Due to a number of factors (the urban "Heat-Island" effect, for one), the number of days with maximum temperatures of 90, 100, and 105 degrees or higher has increased considerably over the past quarter-century or so. Whether this increase can be considered a significant warming trend is beyond the scope of this publication. Part of the increase, however, can be attributed to the location of the thermometer --on top of the Post Office Building, almost in the center of the city. More often than not, the maximum temperature in downtown Sacramento is usually two to four degrees higher than the surrounding area. This is especially true in the summer during hot and calm days.

The urban Heat Island has also caused a decrease in the frequency of minimum temperatures 32 degrees or lower. This fact is readily apparent on the following page. Note that most record minimum temperatures on this page are quite old--only a handful of occurrences taking place over the past 20 years.

The following is a quick reference showing the earliest and latest dates when maximum temperatures reached 90, 100, and 105 degrees or higher:

Earliest date 90 or higher ..... March 26, 1988
Latest date 90 or higher ..... October 24, 1959,1965 and 1990

Earliest date 100 or higher ..... May 4, 1990
Latest date 100 or higher ..... October 10, 1991

Earliest date 105 or higher ..... May 7, 1987
Latest date 105 or higher ..... September 17, 1984

GREATEST NUMBER OF CONSECUTIVE DAYS WITH MINIMUM TEMPERATURES 32 DEGREES OR LOWER (December 1877-March 1996)

Days	Period	Days	Period
13	December 20, 1990 - January 1, 1991	7	January 18-24, 1922
10	December 29, 1960 - January 7, 1961	7	January 5-11, 1913
10	December 21-30, 1930	6	December 29, 1959 - January 3, 1960
10	December 15-24, 1928	6	January 2-7, 1950
10	December 27, 1918 - January 5, 1919	6	January 6-11, 1937
9	December 15-23, 1965	6	January 10-15, 1926
9	December 25, 1962 - January 2, 1963	6	January 15-20, 1917
9	January 23-31, 1949	6	December 17-22, 1908
9	February 2-10, 1883	6	January 9-14, 1898
8	December 10-17, 1985	6	January 6-11, 1888
8	December 8-15, 1972	6	January 13-18, 1888
8	January 11-18, 1963	6	January 18-23, 1883
8	January 8-15, 1949	6	February 2-9, 1883
8	January 7-14, 1929	6	December 10-15, 1883
8	February 7-14, 1884	6	January 27-February 1, 1880
7	December 9-15, 1932	6	December 14-19, 1878
7	January 1-7, 1924		

Only periods with 6 or more days tabulated.

GREATEST NUMBER OF DAYS WITH MINIMUM TEMPERATURES 32 DEGREES OR LOWER IN ONE MONTH (Non-consecutive days)

Days	Period	Days	Period
24	January 1949	13	January 1922
17	January 1947	13	January 1888
16	January 1963	13	January 1883
16	January 1898	12	November 1880
14	December 1930	12	December 1956
14	December 1878	12	December 1898
14	January 1937	11	January 1929
13	December 1990	11	December 1949
13	February 1883	11	December 1918

Only months with 11 or more days tabulated.

FREEZE DATA
DOWNTOWN SACRAMENTO
(January 1881-March 1996)

FREEZE (32 OR BELOW)

Latest Date in Spring	Earliest Date in Fall
March 27, 1898	November 4, 1935

Longest Freeze-free Periods

Days	Period
743	December 15, 1980 - December 29, 1982
732	January 2, 1991 - January 2, 1993
720	January 1, 1983 - December 21, 1984
712	January 2, 1979 - December 13, 1980
689	February 11, 1933 - December 31, 1934

Shortest Freeze-free Period

Days	Period
241	March 28, 1898 - November 23, 1898

NUMBER OF DAYS WITH TEMPERATURES 32 DEGREES
OR LOWER IN ANY ONE YEAR

Least Number of Days

Days	Year
0	1885, 1904, 1934, 1976
0	1981, 1983, 1995
1	1881, 1892, 1900, 1907
1	1966, 1974, 1977, 1980, 1991
1	1992, 1994
2	1909, 1915, 1925, 1973, 1979
2	1982, 1984, 1986
2	1984, 1986

Greatest Number of Days

Days	Year
39	1949
27	1883, 1898
22	1947
19	1985
18	1880, 1963
17	1962
16	1922, 1987, 1989
15	1878, 1929
15	1950, 1956, 1990

III. PRECIPITATION RECORDS

MAXIMUM AND MINIMUM PRECIPITATION BY MONTHS
WITH YEAR OF OCCURRENCE
(July 1849-March 1996)

		Maximum Monthly Precipitation		Minimum Monthly Precipitation	
	Normal	Amount	Year	Amount	Year
JANUARY	3.85	15.04	1862	0.15	1889
		12.72	1911	0.23	1984
		12.35	1995	0.29	1920
		9.76	1896	0.37	1976,1991
		9.65	1909	0.45	1904
FEBRUARY	2.98	10.30	1986	0.04	1899
		9.25	1940	0.09	1896
		9.13	1958	0.12	1852
		8.59	1836	0.16	1913
		8.50	1854	0.19	1964,1995
MARCH	2.79	10.00	1850	0.03	1956
		8.45	1906	0.04	1898
		8.30	1983	0.05	1926
		8.14	1864	0.07	1894
		7.84	1995	0.08	1885
APRIL	1.24	14.20	1880	T**	1949*
		5.81	1935	0.03	1933
		5.34	1896	0.05	1931
		4.76	1941	0.06	1946*
		4.58	1942	0.08	1945*
MAY	0.29	3.25	1889	0.00	1992
		3.04	1948	and 13 other years prior	
		2.88	1900		
		2.85	1883		
		2.75	1915		
JUNE	0.12	1.45	1884	0.00	1990
		1.10	1875	and many years prior	
		1.02	1929		
		0.85	1907		
		0.68	1967		

* Also occurred earlier years.
** T is less than 0.01 inch.

MAXIMUM AND MINIMUM PRECIPITATION BY MONTHS
WITH YEAR OF OCCURRENCE
(July 1849-March 1996)

		Maximum Monthly Precipitation		Minimum Monthly Precipitation	
	Normal	Amount	Year	Amount	Year
JULY	0.05	0.90	1974	0.00	1994
		0.63	1860	and many years prior	
		0.55	1861		
		0.31	1980		
		0.22	1979		
AUGUST	0.07	0.67	1953	0.00	1995
		0.59	1965	and many years prior	
		0.57	1976		
		0.37	1989		
		0.35	1954		
SEPTEMBER	0.37	3.62	1904	0.00	1995
		3.58	1918	and 32 other years prior	
		3.15	1989		
		1.54	1959,1982		
		1.35	1957		
OCTOBER	1.12	6.85	1962	0.00	1995
		6.02	1889	and 14 other years prior	
		4.46	1899		
		3.45	1876		
		3.01	1858		
NOVEMBER	2.97	11.34	1885	0.00	1995
		7.44	1970	and 3 other years prior	
		7.13	1981		
		6.72	1864		
		6.69	1973		
DECEMBER	2.76	13.40	1852	0.00	1876,1989
		12.85	1867	0.22	1956
		12.50	1849	0.23	1912
		12.20	1955	0.30	1975
		11.81	1880	0.38	1963

* Also occurred earlier years.

** Normals are based on the Climatological Normals 1961-1990. Note - Prior to the establishment of the Signal Corps Station July 1, 1877, precipitation records were taken as early as 1849 by Dr. F.M. Hatch, retired Army Surgeon, and his associate, Dr. T.M. Logan. Their records are believed reliable.

GREATEST DAILY 24-HOUR PRECIPITATION (INCHES)
(Midnight - Midnight)

July 1877 - March 1996

	JAN		FEB		MAR		APR	
Date	24 Hr Pcpn	Year	24 Hr Pcpn	Year	24 Hr Pcpn	Year	24 Hr Pcpn	Year
1	1.90	1883	2.74	1945	1.33	1911	1.25	1958
2	1.79	1940	2.40	1944	1.91	1995	2.23	1958
3	2.60	1916	1.72	1881	0.95	1906	1.55	1936
4	3.10	1982	2.32	1937	1.26	1978	1.86	1941
5	1.68	1978	1.80	1901	1.97	1879	1.34	1926
6	1.14	1993	0.92	1994	1.80	1952	0.96	1896
7	1.02	1940	1.15	1958	0.74	1986	3.35	1935
8	1.08	1995	1.17	1985	1.37	1939	1.02	1926
9	2.83	1995	2.19	1962	2.62	1884	1.37	1884
10	1.72	1995	1.96	1919	1.44	1918	1.88	1982
11	1.44	1952	2.34	1936	1.18	1893	0.60	1886
12	2.53	1990	2.48	1904	1.30	1983	0.82	1992
13	2.53	1995	1.61	1926	2.38	1889	0.76	1942
14	1.69	1911	1.34	1992	1.47	1942	1.20	1963
15	2.25	1894	1.86	1891	2.20	1899	1.84	1880
16	1.53	1973	1.94	1990	1.15	1907	0.30	1957
17	1.90	1921	3.21	1986	0.75	1991	0.73	1881
18	1.22	1973	1.91	1958	1.74	1907	0.90	1890
19	1.46	1969	2.16	1894	0.76	1954	1.00	1988
20	2.10	1964	1.21	1914	0.97	1910	5.28	1880
21	3.14	1943	1.26	1917	2.52	1937	3.09	1880
22	1.61	1878	1.04	1891	1.09	1995	0.52	1990
23	2.50	1886	1.26	1891	1.55	1906	0.60	1896
24	1.76	1942	1.82	1917	1.06	1991	1.90	1896
25	1.34	1890	0.90	1902	0.98	1884	0.61	1952
26	1.13	1983	1.46	1940	1.61	1883	0.62	1960
27	1.78	1896	2.19	1940	1.33	1963	1.54	1953
28	1.32	1926	1.41	1935	1.28	1904	1.24	1983
29	2.66	1881	0.61	1976	0.96	1940	1.52	1901
30	1.70	1963			2.27	1906	0.30	1977*
31	1.42	1938			1.83	1982		
Month:	3.14	1943	3.21	1986	2.62	1884	5.28	1880

* Also occurred on earlier years.

GREATEST DAILY 24-HOUR PRECIPITATION (INCHES)
(Midnight - Midnight)

July 1877 - March 1996

	MAY		JUN		JUL		AUG	
Date	24 Hr Pcpn	Year	24 Hr Pcpn	Year	24 Hr Pcpn	Year	24 Hr Pcpn	Year
1	0.59	1905	0.45	1899	0.07	1916	T	1918
2	0.56	1971	0.15	1967	0.28	1980	T	1917
3	0.76	1956	0.38	1894	T	1882	T	1899
4	0.85	1883	0.81	1993	0.01	1925	0.02	1899
5	1.94	1889	0.23	1934	0.04	1895	0.01	1974
6	1.29	1994	0.44	1953	T	1936	T	1961
7	1.31	1905	0.57	1927	0.03	1974	0.25	1989
8	0.78	1893	0.34	1964	0.86	1974	0.13	1962
9	0.41	1980	0.34	1929	0.01	1974*	T	1963
10	0.48	1942	0.13	1879	T	1952	0.01	1965
11	1.00	1915	0.32	1907	T	1908	0.58	1965
12	0.62	1925	0.80	1884	T	1961	T	1923
13	0.95	1941	0.53	1907	T	1942	0	
14	0.39	1953	0.11	1995	T	1935	0.15	1976
15	1.16	1892	0.60	1929	0.02	1975	0.28	1976
16	0.25	1988	0.25	1995	T	1917	0.02	1958
17	0.43	1879	0.03	1909	0.01	1995	0.10	1976
18	0.82	1957	T	1949	T	1922	0.11	1975
19	0.46	1948	0.66	1974	0		0.08	1968
20	0.62	1921	0.04	1897	T	1943	0	
21	0.45	1939	0.02	1943	0.22	1979	0.05	1975
22	0.65	1958	0.09	1923	T	1959	0.01	1976
23	0.37	1960	0.44	1912	T	1959	0.01	1904
24	0.62	1993	0.23	1914	T	1937	0.06	1904
25	0.77	1906	0.03	1988	0.01	1988	0.27	1954
26	0.30	1901	0.05	1971	T	1950	0.08	1954
27	1.56	1990	0.25	1889	T	1896	0.01	1949
28	0.36	1936	0.56	1991	0.01	1964	T	1949
29	0.26	1948	0.19	1992*	0		0.67	1953
30	1.67	1948	0.01	1916	0.07	1966*	0.20	1896
31	0.44	1899			T	1949	0.06	1964
Month:	1.94	1889	0.81	1993	0.86	1974	0.67	1953

* Also occurred earlier years.
T= Less than 0.01 inch.

GREATEST 24-HOUR PRECIPITATION (INCHES)
(Midnight - Midnight)

July 1877 - March 1996

	SEP		OCT		NOV		DEC	
Date	24 Hr Pcpn	Year	24 Hr Pcpn	Year	24 Hr Pcpn	Year	24 Hr Pcpn	Year
1	T	1941	0.79	1909	0.67	1935	1.70	1952
2	0.15	1912	0.34	1898	0.80	1882	2.05	1880
3	0.16	1897	1.82	1882	1.16	1882	2.00	1890
4	T	1900	0.45	1994	1.37	1970	1.41	1881
5	0.18	1912	1.12	1924	1.29	1994	0.78	1889
6	0.89	1912	0.41	1923	1.40	1966	0.96	1950
7	0.39	1919	0.60	1889	1.00	1885	0.98	1889
8	0.10	1884	0.63	1904	0.99	1954	1.23	1909
9	0.26	1985	0.79	1947	1.28	1924	1.87	1954
10	0.27	1895	0.98	1926	1.64	1983	1.92	1937
11	0.49	1976	1.44	1948	0.81	1877	2.27	1995
12	3.13	1918	2.17	1962	1.84	1981	1.09	1922
13	0.29	1918	3.63	1962	2.25	1981	1.73	1915
14	0.44	1955	0.75	1935	0.87	1934	1.56	1929
15	0.43	1888	0.78	1969	1.27	1954	1.18	1957
16	1.75	1989	0.69	1984	1.95	1888	0.95	1957
17	0.62	1950	0.43	1914	3.02	1885	1.33	1884
18	1.46	1959	0.42	1958	2.20	1885	1.40	1955
19	0.80	1956	0.24	1900	1.39	1966	2.41	1955
20	0.06	1896	1.14	1889	1.33	1903	1.32	1884
21	0.15	1916	1.94	1899	2.32	1900	2.81	1885
22	0.50	1917	1.32	1889	1.07	1978	1.94	1955
23	1.74	1904	1.18	1897	1.60	1896	1.38	1884
24	0.61	1904	0.94	1951	2.27	1985	2.21	1983
25	1.15	1904	1.19	1979	1.09	1989	2.42	1884
26	0.41	1972	1.02	1950	0.78	1926	1.58	1955
27	0.62	1957	1.00	1901	1.19	1984	1.96	1931
28	0.37	1989	1.09	1981	2.20	1970	1.25	1992
29	0.80	1890	0.80	1992	1.28	1970	1.47	1933
30	0.74	1883	0.95	1945	3.26	1892	1.32	1913
31			0.63	1944			1.07	1913
Month:	3.13	1918	3.63	1962	3.26	1892	2.81	1885

* Also occurred earlier years
T is less than 0.01 inch.

GREATEST NUMBER OF DAYS WITH 0.01 INCH OR MORE AND 0.10 INCH OR MORE BY MONTH AND YEAR OF OCCURRENCE
(July 1877-March 1996)

	0.01 Inch or more			0.10 Inch or more		
Month	Average* # of Days	Greatest # of Days	Year	Average* # of Days	Greatest # of Days	Year
January	10	25	1995**	6	20	1909
February	8	19	1902	5	15	1936
March	8	19	1989**	6	16	1983
April	5	16	1948	3	13	1948
May	2	10	1915	--	7	1915
June	1	7	1884	--	4	1884
July	--	3	1974	--	1	1980**
August	--	5	1976	--	3	1976
September	2	8	1982	1	5	1982
October	4	11	1889	2	10	1889
November	8	17	1984**	6	14	1984
December	9	23	1889	5	18	1889
Annual	59	98	1983	37	69	1983

GREATEST NUMBER OF DAYS WITH 0.50 INCH OR MORE AND 1.00 INCH OR MORE BY MONTH AND YEAR OF OCCURRENCE
(July 1877-March 1996)

	0.50 Inch or more			1.00 Inch or more		
Month	Average* # of Days	Greatest # of Days	Year	Average* # of Days	Greatest # of Days	Year
January	3	11	1911	1	5	1993**
February	2	9	1878	1	5	1958
March	2	8	1991	--	3	1907
April	--	6	1880	--	3	1880
May	--	3	1883	0	1	1992**
June	0	1	1991**	0	0	----
July	0	1	1974	0	0	----
August	0	1	1965**	0	0	----
September	--	3	1904	0	2	1904
October	--	5	1889	--	3	1889
November	2	6	1973**	--	4	1885
December	2	10	1880	--	5	1955
Annual	13	31	1983	4	11	1940

* Averages based on Climatological Normals 1961-1990
** Also recorded earlier years
-- Less than one day.

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.01 INCH OR MORE
(Periods with 12 or more days tabulated)
(1878-1995)

Days	Period	Total Rainfall
16	February 6-February 21, 1992	6.78
15	February 10-February 24, 1936	8.00
15	November 24-December 8, 1970	7.12
14	January 3-January 16, 1955	9.30
14	January 23-February 5, 1911	7.01
14	November 29-December 12, 1889	5.34
13	December 13-December 25, 1880	7.75
13	January 18-January 30, 1969	6.45
12	December 31, 1939-January 11, 1940	6.65
12	March 15-March 26, 1907	5.94
12	February 26-March 9, 1911	4.78
12	January 24-February 4, 1915	2.59

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.25 INCH OR MORE
(Periods with 6 or more days tabulated)
(1878-1995)

Days	Period	Total Rainfall
10	December 17-December 26, 1884	10.34
9	February 8-February 16, 1992	5.04
8	February 14-February 21, 1980	6.95
8	January 11-January 18, 1906	6.52
8	December 20-December 27, 1921	3.58
7	February 12-February 18, 1986	9.44
7	December 17-December 23, 1955	8.13
7	December 21-December 27, 1940	7.09
7	November 28-December 4, 1970	6.02
7	March 10-March 16, 1889	4.76
6	March 29-April 3, 1958	5.47
6	January 13-January 18, 1896	4.56
6	January 9-January 14, 1980	4.12
6	February 20-February 25, 1902	3.65
6	February 25-March 2, 1983	3.41

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.50 INCH OR MORE
(Periods with 4 or more days tabulated)
(1878-1995)

Days	Period	Total Rainfall
9	December 17-December 25, 1884	10.09
6	December 21-December 26, 1940	6.75
5	February 14-February 18, 1986	8.12
4	February 25-February 28, 1940	6.75
4	January 11-January 14, 1911	5.03
4	January 13-January 16, 1978	4.59
4	February 14-February 17, 1980	4.02
4	January 15-January 18, 1896	3.96
4	January 15-January 18, 1906	3.54
4	December 5-December 8, 1889	3.34
4	November 19-November 22, 1978	3.00
4	January 8-January 11, 1936	2.18

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 1.00 INCH OR MORE
(Periods with 3 or more days tabulated)
(1878-1995)

Days	Period	Total Rainfall
3	February 16-February 18, 1986	6.85
3	January 8-January 10, 1995	5.63
3	January 20-January 22, 1943	5.45
3	February 26-February 28, 1940	4.66
3	October 20-October 22, 1889	3.48

GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT MEASURABLE RAIN
(Less than 0.01 inch) DURING AN ENTIRE YEAR
(July 1877-December 1995)

Days	Period	Days	Period
194	May 13-November 22, 1880	147	May 7-September 30, 1926
174	April 18-October 8, 1903	145	May 13-October 4, 1924
162	May 25-November 2, 1960	143	May 21-October 10, 1987
160	May 9-October 15, 1886	143	April 27-September 16, 1959
155	May 31-November 1, 1932	140	May 31-October 17, 1990
153	May 27-October 26, 1905	140	May 12-September 28, 1890

GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT MEASURABLE RAIN
DURING THE LATE SUMMER, FALL AND PARTS OF THE WINTER SEASON
(August 1877-December 1995)

Days	Period	Days	Period
122	August 1-November 30, 1995	71	August 1-October 10, 1987
114	August 1-November 22, 1880	68	September 1-November 7, 1915
93	August 1-November 2, 1960	67	August 5-October 10, 1899
92	August 1-November 1, 1932	66	August 1-October 5, 1929
87	August 1-October 26, 1960	64	August 1-October 3, 1994
82	August 6-October 26, 1974	64	September 30-December 2, 1890
82	September 7-November 27, 1887	63	August 12-October 13, 1965
81	August 11-October 30, 1913	63	September 7-November 8, 1925
80	August 1-October 19, 1992	62	September 11-November 11, 1952
78	August 1-October 17, 1990	60	October 18-December 16, 1884
73	August 1-October 12, 1988	59	September 16-November 14, 1888

GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT MEASURABLE RAIN
DURING THE WINTER MONTHS
(November 1877-December 1995)

Days	Period	Days	Period
44	November 15-December 28, 1976	36	December 18, 1960-January 22, 1961
42	January 17-February 27, 1899	36	November 15-December 20, 1958
41	December 18, 1962-January 27, 1957	34	December 5, 1956-January 7, 1957
38	November 4-December 11, 1959	32	November 2-December 3, 1956
38	November 8-December 15, 1940	31	November 1-December 1, 1933
38	February 15-March 24, 1883	30	November 8-December 7, 1969
36	November 26-December 31, 1989	30	November 15-December 14, 1936

WATER YEAR* IN WHICH 11 MONTHS OF THE SEASON HAD MEASURABLE RAIN
(No Water Year has ever had measurable rain the entire 12 months)
(July 1849-December 1995)

Season	Season
1860-61	1962-63
1896-97	1979-80
1897-98	1983-84
1949-50	1984-85
1961-62	

WATER YEAR* IN WHICH THERE WERE 5 OR MORE MONTHS
WITHOUT MEASURABLE RAIN
(July 1849-December 1995)

Season	Season
1852-53	1886-87
1856-57	1902-03
1872-73	1929-30
1880-81	

* Water Year is the 12-month period from July 1 through June 30.

Prior to the establishment of the U. S. Signal Corps station on July 1, 1877, precipitation records were kept from 1849 by Dr. F. M. Hatch, retired Army Surgeon, and his associate, Dr. T. M. Logan. Their records are believed to be reliable.

MAXIMUM AMOUNTS OF PRECIPITATION FOR 5, 10, AND 30 MINUTES
1, 2 AND 24 HOURS BY MONTHS WITH DATES AND YEARS OF OCCURRENCES
(January 1903-December 1995)

Month	5 Minutes	10 Minutes	30 Minutes	1 Hour	2 Hours	24 Hours
January	0.38 09/1995	0.59 09/1995	1.27 09/1995	1.44 09/1995	1.71 09/1995	4.47 09-10/1995
February	0.29 27/1973	0.53 27/1973	0.90 27/1973	1.01 27/1973	1.19 27/1973	3.54 16-17/1986
March	0.37 02/1995	0.50 02/1995	0.80 30/1906	0.94 30/1906	1.01 30/1906	2.94 08-09/1884
April	0.39 07/1935	0.62 07/1935	0.97 07/1935	1.65 07/1935	2.62 07/1935	7.24 20-21/1880
May	0.24 13/1941	0.27 13/1941	0.29 11/1915	0.41 07/1905	0.59 07/1905	1.94 05/1889
June	0.17 04/1993	0.19 04/1993	0.27 19/1974	0.45 04/1993	0.66 04/1993	0.84 03-04/1993
July	0.02 02/1980	0.04 02/1980	0.09 08/1974	0.13 08/1974	0.24 08/1974	0.89 07-08/1974
August	0.04 08/1962	0.06 15/1976*	0.13 15/1976	0.20 25-26/1954	0.30 25-26/1954	0.67 29/1953
September	0.23 23/1904	0.33 23/1904	0.69 23/1904	0.71 23/1904	0.96 23/1904	3.14 11-12/1918
October	0.36 26/1950	0.52 26/1921	0.66 26/1921	0.69 23/1987	0.85 13/1962	5.07 12-13/1962
November	0.29 13/1983	0.39 13/1983	0.55 13/1983	0.65* 13/1983	0.85 14-15/1934	4.29 17-18/1885
December	0.27 01/1951	0.36 01/1951	0.55 01/1951	0.69 01/1951	0.87 01/1951	3.27 18-19/1955
Annual	0.39 April 7 1935	0.62 April 7 1935	1.27 January 9 1995	1.65 April 7 1935	2.62 April 7 1935	7.24 April 20-21, 1880

* Also occurred earlier years. 24-hour amounts are from July 1877 through December 1985. These amounts are from any 24-hour period and are not confined to a midnight-midnight period such as the figures on pages 37-38.

TABULATED RAINFALL DATA - EXCESSIVE STORMS* 1903-1995

TOTAL PRECIPITATION BY PERIODS

		48 Hours		24 Hours		2 Hours		1 Hour	
Year	Month	Date	Total	Date	Total	Date	Total	Date	Total
1962	October	12-13	6.42	12-13	5.07	13	0.85	12	0.57
1986	February	16-17	5.05	16-17	3.54	17	0.72	17	0.40
1986	February	17-18	5.01	17	3.21	18	1.01	18	0.52
1995	January	09-10	4.55	09-10	4.47	09	1.74	09	1.44
1943	January	20-21	4.29	20-21	3.52	20	1.09	20	0.63
1981	November	12-13	4.09	12-13	2.61	13	0.57	12	0.32
1967	January	20-21	4.09	20-21	3.12	21	0.86	21	0.61
1982	January	3-5	4.00	4-5	3.50	5	0.45	4	0.25
1936	February	11-12	3.89	11	2.34	12	0.85	12	0.77
1935	December	18-19	3.81	18-19	3.28	18	0.59	18	0.31
1937	December	9-11	3.67	9-10	2.22	11	0.52	10	0.39
1940	February	26-27	3.65	26-27	3.32	27	0.53	27	0.28
1944	February	2-3	3.56	2-3	2.82	2	0.39	2	0.20
1911	January	13-14	3.53	13-14	3.31	14	0.38	14	0.21
1958	April	1-2	3.48	1-2	2.24	2	0.85	2	0.74
1970	November	28-29	3.48	28-29	2.45	28	0.54	28	0.30
1962	February	9-10	3.45	9-10	2.21	9	0.82	9	0.52
1916	January	2-3	3.41	2-3	3.21	3	0.74	3	0.36
1935	April	7	3.35	7	3.35	7	2.62	7	1.65
1955	December	22-23	3.25	22-23	2.36	22	0.58	22	0.38
1983	December	24-25	3.24	24-25	2.85	25	0.45	25	0.27
1931	December	26-27	3.23	26-27	2.98	26	0.38	26	0.20
1940	December	21-22	3.22	21	2.38	21	0.55	21	0.32
1918	September	12-13	3.17	12-13	3.14	12	0.72	12	0.38
1990	January	12-13	2.93	12-13	2.73	12	1.41	12	0.86
1958	February	18-19	2.93	18-19	2.66	18	0.39	18	0.22
1964	December	21-22	2.92	21-22	1.89	22	0.40	22	0.23
1952	January	11-12	2.90	11-12	2.73	12	0.43	11	0.33
1964	January	20-21	2.86	20-21	2.30	20	0.83	20	0.49
1983	March	12-13	2.78	12-13	2.63	13	0.66	13	0.52
1978	January	13-14	2.65	13-14	1.98	13	0.61	13	0.43
1973	February	26-27	2.62	27	2.11	27	1.19	27	1.01
1950	November	17-18	2.58	17-18	2.08	18	0.48	18	0.29

* These are storms that provided 2.50 inches or more precipitation in a 48-hour period.

MONTHLY PRECIPITATION BY SEASON, WITH SEASONAL TOTAL AND THE ACCUMULATED PRECIPITATION THROUGH DECEMBER 31
(Rainfall Season July 1-June 30)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Pcpn to Dec 31	Jan	Feb	Mar	Apr	May	Jun	Total Pcpn
Normal*	0.05	0.07	0.37	1.12	2.97	2.76	7.34	3.85	2.98	2.79	1.24	0.29	0.12	18.61
1849-50	0.00	0.00	0.25	1.50	2.25	12.50	16.50	4.50	0.50	10.00	4.25	0.25	0.00	36.00
1850-51	0.00	0.00	0.14	0.05	0.69	2.67	3.55	0.65	0.35	1.88	1.14	0.69	0.00	8.26
1851-52	0.00	0.00	1.00	0.18	2.14	7.07	10.39	0.58	0.12	6.40	0.19	0.30	0.00	17.98
1852-53	0.00	0.00	T	0.00	6.00	13.40	19.40	3.00	2.00	7.00	3.50	1.45	T	36.35
1853-54	T	0.00	T	T	1.50	1.54	3.04	3.25	8.50	3.25	1.50	0.21	0.31	20.06
1854-55	0.00	T	T	1.01	0.65	1.15	2.81	2.67	3.46	4.20	4.32	1.15	0.01	18.62
1855-56	0.00	0.00	T	0.00	0.75	2.00	2.75	4.92	0.69	1.40	2.13	1.84	0.03	13.76
1856-57	0.00	0.00	T	0.20	0.65	2.40	3.25	1.38	4.80	0.68	T	T	0.35	10.46
1857-58	0.00	T	0.00	0.66	2.41	2.63	5.70	2.44	2.46	2.88	1.21	0.20	0.10	14.99
1858-59	0.01	T	T	3.01	0.15	4.34	7.51	0.96	3.91	1.64	0.98	1.04	0.00	16.04
1859-60	0.00	0.00	0.02	0.00	6.48	1.83	8.33	2.31	0.93	5.11	2.87	2.49	0.02	22.06
1860-61	0.63	0.00	0.06	0.91	0.18	4.28	6.06	2.67	2.92	3.32	0.48	0.59	0.14	16.18
1861-62	0.55	0.00	0.00	T	2.17	8.64	11.36	15.04	4.26	2.80	0.82	1.81	0.01	36.10
1862-63	0.00	0.01	0.00	0.36	T	2.33	2.70	1.73	2.75	2.36	1.69	0.36	0.00	11.59
1863-64	0.00	0.00	T	0.00	1.49	1.82	3.31	1.08	0.19	1.30	1.08	0.74	0.09	7.79
1864-65	0.00	0.08	T	0.12	6.72	7.87	14.79	4.78	0.71	0.48	1.37	0.46	0.00	22.59
1865-66	T	0.00	0.08	0.48	2.43	0.36	3.35	7.70	2.01	2.02	0.48	2.25	0.10	17.91
1866-67	0.02	0.00	0.00	T	2.43	9.51	11.96	3.44	7.10	1.01	1.80	0.01	0.00	25.32
1867-68	0.00	0.00	0.01	0.00	3.81	12.85	16.67	6.04	3.15	4.35	2.31	0.27	T	32.79
1868-69	0.00	0.00	0.00	0.00	0.77	2.61	3.38	4.79	3.63	2.94	1.24	0.65	0.01	16.64
1869-70	0.00	0.00	T	2.12	0.85	1.96	4.93	1.37	3.24	1.64	2.12	0.27	T	13.57
1870-71	T	T	0.00	0.02	0.58	0.97	1.57	2.08	1.92	0.69	1.45	0.76	T	8.47
1871-72	0.00	0.00	T	0.21	1.22	10.59	12.02	4.04	4.74	1.94	0.61	0.28	0.02	23.65
1872-73	0.00	0.00	T	0.22	1.93	5.39	7.54	1.23	4.36	0.55	0.51	0.00	T	14.19
1873-74	0.02	T	0.00	0.31	1.21	10.01	11.55	5.20	1.86	3.05	0.89	0.37	T	22.92
1874-75	T	0.00	0.05	2.26	3.80	0.44	6.55	8.70	0.55	0.80	T	T	1.10	17.70
1875-76	0.00	0.00	0.00	0.44	6.20	5.52	12.16	4.99	3.75	4.15	1.10	0.15	0.00	26.30
1876-77	0.21	0.02	T	3.45	0.30	0.00	3.98	2.77	1.04	0.56	0.19	0.64	0.01	9.19
1877-78	0.00	0.00	0.00	0.73	1.07	1.43	3.23	9.26	8.04	3.09	1.07	0.17	0.00	24.86
1878-79	0.00	0.00	0.29	0.55	0.51	0.47	1.82	3.18	3.88	4.88	2.66	1.30	0.13	17.85
1879-80	T	T	0.00	0.88	2.05	3.41	6.34	1.64	1.83	1.70	14.20	0.76	0.00	26.47

*Normal precipitation is for the period 1961-1990.

MONTHLY PRECIPITATION BY SEASON, WITH SEASONAL TOTAL AND THE ACCUMULATED PRECIPITATION THROUGH DECEMBER 31
(Rainfall Season July 1-June 30)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Pcpn to Dec 31	Jan	Feb	Mar	Apr	May	Jun	Total Pcpn
Normal*	0.05	0.07	0.37	1.12	2.97	2.76	7.34	3.85	2.98	2.79	1.24	0.29	0.12	18.61
1880-81	T	0.00	0.00	0.00	0.05	11.81	11.86	6.14	5.06	1.37	1.64	T	0.50	26.57
1881-82	T	0.00	0.30	0.55	1.88	3.27	6.00	1.89	2.40	3.78	1.99	0.35	0.10	16.51
1882-83	T	0.00	0.57	2.63	3.22	1.13	7.55	2.23	1.11	3.70	0.67	2.85	0.00	18.11
1883-84	0.00	0.00	0.90	0.97	0.61	0.44	2.92	3.43	4.46	8.14	4.42	0.06	1.45	24.78
1884-85	0.00	T	0.60	2.01	0.00	10.45	13.06	2.16	0.49	0.08	0.68	T	0.11	16.58
1885-86	T	0.00	0.08	0.02	11.34	5.76	17.20	7.95	0.29	2.68	4.08	0.07	0.00	32.27
1886-87	0.00	0.00	0.00	0.68	0.21	2.21	3.10	1.12	6.28	0.94	2.53	0.00	0.00	13.97
1887-88	0.00	T	0.02	0.00	0.45	2.09	2.56	4.81	0.57	3.04	0.10	0.40	0.08	11.56
1888-89	T	T	0.55	0.00	4.28	4.63	9.46	0.15	0.33	6.25	0.26	3.25	0.25	19.95
1889-90	0.00	0.00	0.00	6.02	3.15	7.82	16.99	6.62	4.06	3.00	1.33	1.80	0.00	33.80
1890-91	0.00	T	0.80	T	0.00	3.34	4.14	0.53	6.61	1.78	2.04	0.66	0.05	15.81
1891-92	T	0.00	0.10	0.10	0.48	3.28	3.96	1.78	2.84	3.02	1.20	2.38	T	15.18
1892-93	0.00	0.00	0.18	0.70	6.60	4.90	12.38	3.27	2.66	3.51	1.08	1.05	0.00	23.95
1893-94	T	0.00	0.22	0.12	2.92	1.76	5.02	4.17	3.92	0.74	0.34	1.70	0.46	16.35
1894-95	T	T	0.88	1.06	0.48	8.86	11.28	8.42	1.84	1.20	0.86	0.51	0.00	24.11
1895-96	0.04	T	1.26	0.17	1.54	1.54	4.55	9.79	0.09	2.57	5.34	0.92	0.00	23.23
1896-97	T	0.20	0.31	0.55	3.56	1.76	6.38	3.66	4.15	2.54	0.25	0.30	0.04	17.32
1897-98	0.00	0.01	0.16	1.96	0.61	1.64	4.38	0.98	3.19	0.04	0.28	1.50	0.14	10.51
1898-99	0.00	0.00	0.36	0.64	0.61	2.30	3.91	3.94	0.04	6.02	0.10	0.54	0.49	15.04
1899-00	0.00	0.02	0.00	4.46	2.62	2.91	10.01	3.54	0.32	1.61	1.88	2.88	0.00	20.24
1900-01	T	0.00	0.06	1.74	4.50	1.38	7.68	3.70	5.32	0.48	2.23	0.80	0.00	20.21
1901-02	T	T	0.56	1.56	2.68	1.19	5.99	0.95	6.52	1.99	1.36	0.45	0.01	17.27
1902-03	0.00	T	0.00	1.67	2.02	2.91	6.60	3.05	1.70	4.81	0.46	T	T	16.62
1903-04	0.00	0.00	0.00	0.12	3.44	1.12	4.68	0.45	5.26	5.43	1.02	0.03	T	16.87
1904-05	T	0.07	3.62	1.86	2.05	1.20	8.80	3.33	2.47	3.75	1.18	2.45	0.00	21.98
1905-06	0.00	T	0.03	0.00	1.20	0.56	1.79	6.63	3.02	8.45	1.21	2.24	0.59	23.93
1906-07	0.00	T	0.20	T	0.99	7.37	8.56	4.63	2.37	7.28	0.25	0.10	0.85	24.04
1907-08	0.00	0.00	T	1.20	0.04	3.33	4.57	3.84	2.75	0.42	0.08	0.54	T	12.20
1908-09	T	0.00	0.05	0.26	1.23	2.04	3.58	9.65	6.68	1.84	T	T	0.03	21.78
1909-10	0.00	0.00	0.21	1.27	1.32	3.87	6.67	1.48	0.83	3.06	0.11	0.03	T	12.18

*Normal precipitation is for the period 1961-1990.

MONTHLY PRECIPITATION BY SEASON, WITH SEASONAL TOTAL AND THE ACCUMULATED PRECIPITATION THROUGH DECEMBER 31
(Rainfall Season July 1-June 30)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Pcpn to Dec 31	Jan	Feb	Mar	Apr	May	Jun	Total Pcpn
Normal*	0.05	0.07	0.37	1.12	2.97	2.76	7.34	3.85	2.98	2.79	1.24	0.29	0.12	18.61
1910-11	T	0.00	0.20	0.28	0.17	1.62	2.27	12.72	1.88	4.30	0.66	0.03	0.12	21.98
1911-12	0.00	0.00	T	0.18	0.15	1.07	1.40	2.74	0.23	1.97	1.69	0.94	0.58	9.55
1912-13	T	0.00	1.25	0.58	0.80	0.23	2.86	2.52	0.16	1.34	0.53	0.51	0.11	8.03
1913-14	T	0.01	T	0.13	4.58	4.40	9.12	5.97	2.96	0.59	0.70	0.50	0.60	20.44
1914-15	0.00	0.00	T	0.82	0.47	3.44	4.73	3.76	4.26	1.20	0.50	2.75	0.00	17.20
1915-16	T	0.01	T	T	0.83	4.42	5.26	9.35	2.45	1.06	0.06	0.10	0.01	18.29
1916-17	0.07	T	0.16	0.79	0.49	3.73	5.24	1.30	4.97	0.70	0.62	0.12	0.00	12.95
1917-18	T	T	0.51	T	0.25	0.45	1.21	0.97	3.36	4.00	1.06	0.01	T	10.61
1918-19	0.00	T	3.58	0.40	1.84	1.70	7.52	1.77	6.29	1.50	0.11	0.01	0.00	17.20
1919-20	T	T	0.53	0.01	0.36	2.22	3.12	0.29	0.81	3.27	1.36	0.00	0.05	8.90
1920-21	0.00	T	0.01	1.29	3.39	4.32	9.01	4.61	0.54	1.45	0.39	0.75	0.05	16.80
1921-22	0.00	0.00	T	0.80	1.09	3.81	5.70	2.16	4.18	1.29	0.40	0.43	T	14.16
1922-23	T	T	0.00	0.72	3.03	6.12	9.87	2.05	0.30	0.43	2.87	0.08	0.09	15.69
1923-24	0.00	T	0.50	0.58	0.62	0.94	2.64	1.80	2.00	1.19	0.30	0.06	0.00	7.99
1924-25	T	T	T	2.10	1.59	3.63	7.32	1.02	4.45	1.14	1.61	2.11	0.05	17.70
1925-26	0.01	0.01	0.02	T	1.13	1.50	2.67	3.20	5.52	0.05	4.25	0.36	0.00	16.05
1926-27	0.00	T	T	2.14	4.48	0.58	7.20	2.30	4.99	1.01	1.47	0.21	0.57	17.75
1927-28	0.00	T	0.01	1.45	1.81	1.55	4.82	1.17	1.38	3.39	0.78	0.02	0.04	11.60
1928-29	T	0.00	T	0.15	2.98	2.66	5.79	0.88	1.44	0.78	0.44	0.04	1.02	10.39
1929-30	T	0.00	0.00	0.15	0.00	4.06	4.21	3.65	1.62	2.86	0.94	0.34	T	13.62
1930-31	0.00	T	0.29	0.47	1.11	0.56	2.43	2.50	1.35	1.14	0.05	0.67	0.29	8.43
1931-32	T	T	T	0.18	1.30	6.84	8.32	1.09	1.76	0.34	0.76	0.30	T	12.57
1932-33	T	0.00	0.00	0.00	0.36	2.11	2.47	2.85	0.95	1.44	0.03	0.30	0.08	8.12
1933-34	T	0.00	0.03	0.66	0.00	5.74	6.43	1.33	2.97	0.13	0.16	0.26	0.30	11.58
1934-35	0.00	T	0.01	0.45	2.61	2.50	5.57	4.81	1.97	2.93	5.81	0.01	0.00	21.10
1935-36	T	T	T	1.22	0.77	2.18	4.17	3.80	8.59	1.33	1.69	0.68	0.27	20.53
1936-37	T	0.00	T	0.35	0.03	2.62	3.00	2.92	6.18	6.37	1.10	0.01	0.18	19.76
1937-38	T	0.00	0.00	0.87	2.69	4.06	7.62	3.50	8.24	3.92	1.51	0.04	T	24.83
1938-39	T	0.00	0.30	1.29	0.88	0.71	3.18	1.91	1.06	2.42	0.25	0.92	T	9.74
1939-40	T	0.00	0.35	0.45	0.07	1.15	2.02	7.98	9.25	4.22	0.68	0.92	T	25.07

*Normal precipitation is for the period 1961-1990.

MONTHLY PRECIPITATION BY SEASON, WITH SEASONAL TOTAL AND THE ACCUMULATED PRECIPITATION THROUGH DECEMBER 31
(Rainfall Season July 1-June 30)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Pcpn to Dec 31	Jan	Feb	Mar	Apr	May	Jun	Total Pcpn
Normal*	0.05	0.07	0.37	1.12	2.97	2.76	7.34	3.85	2.98	2.79	1.24	0.29	0.12	18.61
1940-41	0.00	0.00	0.01	0.93	1.32	9.40	11.66	5.78	5.40	2.86	4.76	1.35	0.02	31.83
1941-42	0.00	T	T	0.86	1.17	6.29	8.32	4.68	2.98	3.31	4.58	1.07	0.00	24.94
1942-43	T	0.00	0.03	0.27	2.22	3.16	5.68	7.04	1.26	3.60	1.91	0.14	0.35	19.98
1943-44	T	0.00	T	0.16	0.62	2.02	2.80	3.08	7.27	1.42	1.66	0.83	0.52	17.58
1944-45	0.00	0.00	T	1.39	3.54	2.31	7.24	1.82	4.49	2.83	0.08	0.55	0.05	17.06
1945-46	T	T	0.00	2.53	1.60	5.50	9.63	0.77	0.90	1.94	0.06	0.61	0.00	13.91
1946-47	T	0.00	0.04	0.75	2.42	1.56	4.77	0.60	2.34	3.28	0.15	0.17	0.28	11.59
1947-48	0.00	0.00	T	2.60	1.02	0.65	4.27	0.51	0.88	3.68	3.05	3.04	0.01	15.44
1948-49	0.00	0.00	0.10	1.45	0.59	4.88	7.02	1.47	1.91	4.15	T	0.32	T	14.87
1949-50	T	0.01	0.03	0.14	1.10	1.90	3.18	4.41	3.27	2.00	1.03	0.37	0.05	14.31
1950-51	T	0.00	0.62	2.35	5.50	4.72	13.19	2.45	1.57	0.84	0.85	0.64	T	19.54
1951-52	0.00	T	0.25	1.33	3.18	5.11	9.87	8.65	1.65	4.50	1.41	0.05	0.45	26.58
1952-53	0.01	0.00	0.05	0.00	2.04	7.27	9.37	3.51	0.21	1.42	2.69	0.52	0.61	18.33
1953-54	0.00	0.67	0.00	0.18	1.79	0.56	3.20	3.26	3.70	3.29	1.88	0.21	T	15.54
1954-55	0.00	0.35	0.00	0.02	3.35	4.93	8.65	3.14	1.33	0.37	2.75	0.67	0.01	16.92
1955-56	0.00	0.00	0.95	0.57	1.16	12.20	14.88	7.58	2.43	0.03	1.86	0.96	T	27.74
1956-57	0.00	0.00	0.84	1.32	0.06	0.22	2.44	2.47	4.18	2.23	1.66	1.78	T	14.76
1957-58	0.00	0.00	1.35	1.35	0.33	3.07	6.10	5.38	9.13	5.93	4.41	0.72	0.27	31.94
1958-59	0.00	0.02	0.12	0.42	0.16	0.72	1.44	4.62	3.64	0.46	0.30	T	0.00	10.46
1959-60	T	T	1.54	T	0.01	1.28	2.83	3.25	2.91	1.62	1.26	0.41	0.00	12.28
1960-61	T	0.00	T	T	4.38	0.70	5.08	3.11	1.19	2.02	0.49	0.13	0.02	12.04
1961-62	T	0.01	0.17	0.03	2.96	1.44	4.61	0.95	7.60	1.84	0.19	0.06	0.01	15.26
1962-63	0.00	0.13	0.11	6.85	0.40	1.74	9.23	3.65	1.75	3.56	3.43	0.64	0.02	22.28
1963-64	0.00	T	0.35	1.27	3.92	0.38	5.92	3.35	0.19	0.83	0.16	0.18	0.41	11.04
1964-65	0.01	0.06	0.00	1.55	2.64	5.69	9.95	3.66	0.48	1.61	2.97	0.07	T	18.74
1965-66	0.00	0.59	0.00	0.11	3.25	2.89	6.84	2.11	1.58	0.22	0.59	0.24	T	11.58
1966-67	0.09	0.00	0.05	0.00	5.48	3.33	8.95	7.94	0.40	4.15	3.85	0.12	0.68	26.09
1967-68	0.00	0.00	0.04	0.26	1.25	0.94	2.49	3.34	1.97	2.42	0.40	0.32	0.23	11.17
1968-69	0.00	0.08	0.00	0.68	2.74	3.10	6.60	8.90	7.61	1.13	1.32	0.09	0.01	25.66
1969-70	0.00	0.00	0.03	0.80	0.81	5.36	7.00	7.05	1.45	1.83	0.14	0.00	0.24	17.71

*Normal precipitation is for the period 1961-1990.

MONTHLY PRECIPITATION BY SEASON, WITH SEASONAL TOTAL AND THE ACCUMULATED PRECIPITATION THROUGH DECEMBER 31
(Rainfall Season July 1-June 30)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Pcpn to Dec 31	Jan	Feb	Mar	Apr	May	Jun	Total Pcpn
Normal*	0.05	0.07	0.37	1.12	2.97	2.76	7.34	3.85	2.98	2.79	1.24	0.29	0.12	18.61
1970-71	0.00	0.00	0.00	0.95	7.44	3.73	12.12	1.10	0.33	2.34	0.54	0.94	0.05	17.42
1971-72	0.00	0.00	0.00	0.27	0.88	4.84	5.99	1.07	1.15	0.37	1.27	0.34	0.15	10.34
1972-73	0.00	0.00	0.99	1.70	5.08	2.25	10.02	7.29	6.47	2.89	0.41	0.06	0.00	27.14
1973-74	0.00	0.00	0.44	1.56	6.69	3.05	11.74	3.80	1.57	3.72	1.34	0.00	0.66	22.83
1974-75	0.90	0.01	0.00	1.22	0.86	3.42	6.41	1.15	5.16	4.73	1.10	0.00	0.00	18.55
1975-76	0.02	0.16	0.00	2.32	0.40	0.30	3.20	0.37	1.49	0.61	1.53	0.00	0.05	7.25
1976-77	0.00	0.57	0.81	0.00	0.62	0.62	2.62	1.36	1.10	1.33	0.36	0.76	0.00	7.53
1977-78	0.01	0.00	0.55	0.27	2.00	3.65	6.48	9.61	2.77	4.24	2.26	0.00	0.00	25.36
1978-79	0.00	0.00	0.37	0.01	3.45	0.87	4.70	5.81	5.24	2.67	0.88	0.09	0.00	19.39
1979-80	0.22	0.00	0.01	1.79	1.66	3.96	7.64	5.33	8.08	2.19	1.04	0.47	0.04	24.79
1980-81	0.31	0.00	0.00	0.04	0.26	2.25	2.86	4.97	1.00	3.55	0.71	0.34	0.00	13.43
1981-82	0.00	0.00	0.32	2.64	7.13	3.91	14.00	5.40	2.90	6.82	3.36	0.00	0.17	32.65
1982-83	0.00	0.00	1.54	2.69	5.83	3.44	13.50	5.54	5.28	8.30	4.36	0.23	0.28	37.49
1983-84	0.00	0.01	0.61	0.53	5.83	6.65	13.63	0.23	1.52	1.47	0.44	0.01	0.10	17.40
1984-85	0.00	0.08	0.08	1.87	5.46	1.75	9.24	1.07	1.85	2.79	0.11	0.02	0.14	15.22
1985-86	0.00	0.01	0.71	0.69	4.64	3.19	9.24	4.88	10.30	4.23	1.02	0.08	0.00	29.75
1986-87	0.00	0.00	0.80	0.33	0.22	1.30	2.65	2.55	3.77	3.57	0.26	0.01	0.00	12.81
1987-88	0.00	0.00	0.00	1.30	3.22	3.75	8.27	3.61	0.74	0.31	1.46	0.75	0.23	15.37
1988-89	0.01	0.00	0.00	0.22	2.08	3.32	5.63	0.70	1.38	6.73	0.39	0.04	0.26	15.13
1989-90	0.00	0.37	3.15	1.47	1.26	0.00	6.25	5.49	3.14	1.16	0.75	2.61	0.00	19.40
1990-91	0.00	0.00	0.00	0.28	0.56	1.66	2.50	0.37	3.18	7.48	0.38	0.26	0.56	14.73
1991-92	0.00	0.01	0.05	1.22	0.32	2.04	3.64	1.68	6.89	3.32	0.93	0.00	0.22	16.68
1992-93	0.00	0.00	0.00	1.26	0.38	6.23	7.87	9.37	5.11	2.43	0.75	1.23	0.94	27.70
1993-94	0.00	0.00	0.00	0.43	2.70	2.04	5.17	2.16	3.17	0.07	0.80	1.65	0.00	13.02
1994-95	0.00	0.00	0.00	0.45	3.96	5.74	7.95	12.35	0.19	7.84	1.90	1.01	0.53	31.77
1995-96														
1996-97														
1997-98														
1998-99														
1999-00														

*Normal precipitation is for the period 1961-1990.

NUMBER OF DAYS WITH MEASURABLE RAIN BY MONTH, WITH TOTAL PRECIPITATION FOR THE WATER YEAR*
(July 1877-June 1995)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	# of Days	Total Rain
Average**	--	--	2	4	8	9	10	8	9	5	2	1	59	18.61
1877-78	0	0	0	5	7	5	17	17	14	3	4	0	72	24.86
1878-79	0	0	3	1	2	3	11	9	15	12	5	1	62	17.86
1879-80	0	0	0	4	8	12	7	10	7	15	3	0	66	26.47
1880-81	0	0	0	0	2	21	9	13	6	6	0	2	59	26.57
1881-82	0	0	1	6	4	11	8	6	10	8	1	1	56	16.51
1882-83	0	0	2	6	7	9	5	3	6	7	9	0	54	18.11
1883-84	0	0	2	6	3	6	9	10	13	9	3	7	68	24.78
1884-85	0	0	3	4	0	11	8	5	2	7	0	2	42	16.58
1885-86	0	0	1	2	17	10	13	3	12	12	2	0	72	32.27
1886-87	0	0	0	3	1	7	7	14	5	8	0	0	45	13.97
1887-88	0	0	1	0	3	8	14	5	8	2	2	4	47	11.56
1888-89	0	0	2	0	7	15	3	4	13	6	8	1	59	19.95
1889-90	0	0	0	11	7	23	17	9	14	4	5	0	90	33.80
1890-91	0	0	1	0	0	5	5	13	10	8	4	1	47	15.81
1891-92	0	0	3	2	4	11	5	7	9	7	7	0	55	15.18
1892-93	0	0	2	4	7	9	5	7	13	4	4	0	55	23.95
1893-94	0	0	2	1	7	6	8	9	7	2	7	2	51	16.35
1894-95	0	0	2	5	1	20	15	4	6	4	4	0	61	24.11
1895-96	1	0	4	3	7	8	13	2	13	10	6	0	67	23.23
1896-97	0	1	3	2	8	10	10	13	13	2	1	1	64	17.32
1897-98	0	1	1	4	4	6	6	9	1	2	5	1	40	10.51
1898-99	0	0	1	3	4	4	12	1	11	2	3	2	43	15.04
1899-00	0	1	0	9	13	10	11	4	9	8	4	0	69	20.24
1900-01	0	0	1	7	9	7	13	10	2	4	6	0	59	20.21
1901-02	0	0	1	3	9	4	7	19	8	7	4	1	63	17.27
1902-03	0	0	0	4	7	5	10	7	14	5	0	0	52	16.62
1903-04	0	0	0	1	9	5	6	16	19	10	1	0	67	16.87
1904-05	0	0	5	7	4	8	13	7	13	4	6	0	67	21.98
1905-06	0	0	1	0	3	7	11	14	17	6	6	5	70	23.93
1906-07	0	0	2	0	5	13	17	9	19	4	2	2	73	24.04
1907-08	0	2	0	4	1	12	14	9	3	3	5	0	53	12.20
1908-09	0	0	1	3	4	12	25	17	11	0	0	1	74	21.78
1909-10	0	0	3	5	14	13	12	9	8	1	1	0	66	12.18

* Water Year is the 12-month period beginning July 1 and ending June 30.
** Averages based on Climatological Normals 1960-1991
-- Less than one day.

NUMBER OF DAYS WITH MEASURABLE RAIN BY MONTH, WITH TOTAL PRECIPITATION FOR THE WATER YEAR*
(July 1877-June 1995)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	# of Days	Total Rain
Average**	--	--	2	4	8	9	10	8	9	5	2	1	59	18.61
1910-11	0	0	2	2	4	6	17	12	9	3	2	1	58	21.98
1911-12	0	0	0	1	2	6	11	2	6	7	3	3	41	9.95
1912-13	0	0	4	6	7	3	10	3	6	4	5	1	49	8.03
1913-14	0	1	0	1	12	11	16	6	2	6	2	4	61	20.44
1914-15	0	0	0	4	4	15	15	18	5	5	10	0	76	17.20
1915-16	0	1	0	0	5	9	20	15	5	2	3	1	61	18.29
1916-17	1	0	2	5	4	11	14	9	3	4	3	0	56	12.95
1917-18	0	0	2	0	4	2	2	14	13	3	1	0	41	10.61
1918-19	0	0	6	2	9	4	7	18	8	4	1	0	59	17.20
1919-20	0	0	5	1	4	10	3	6	9	3	0	2	43	8.90
1920-21	0	0	1	6	11	16	12	7	8	2	3	1	67	16.80
1921-22	0	0	0	3	4	12	7	14	14	2	5	0	61	14.16
1922-23	0	0	0	7	5	19	9	3	2	11	2	1	59	15.69
1923-24	0	0	5	4	3	6	7	4	7	2	1	0	39	7.99
1924-25	0	0	0	7	3	13	7	12	5	8	8	2	65	17.70
1925-26	1	1	1	0	7	4	8	10	1	7	2	0	42	16.05
1926-27	0	0	0	4	11	7	12	16	9	7	3	1	70	17.75
1927-28	0	0	1	4	9	10	8	8	11	5	1	1	58	11.60
1928-29	0	0	0	3	6	8	5	6	5	5	1	3	42	10.39
1929-30	0	0	0	2	0	8	14	8	7	6	4	0	49	13.62
1930-31	0	0	4	3	6	3	8	7	6	2	3	3	45	8.43
1931-32	0	0	0	2	8	16	10	5	7	5	5	0	58	12.57
1932-33	0	0	0	0	5	7	12	4	10	1	4	1	44	8.12
1933-34	0	0	2	3	0	12	4	13	3	2	3	3	45	11.58
1934-35	0	0	1	4	8	8	11	8	9	11	1	0	61	21.10
1935-36	0	0	0	4	5	11	12	16	3	4	3	3	58	20.53
1936-37	0	0	0	2	1	9	15	10	14	5	1	1	58	19.76
1937-38	0	0	0	4	9	9	13	16	13	6	3	0	73	24.83
1938-39	0	0	2	6	4	7	10	8	5	3	4	0	49	9.74
1939-40	0	0	3	4	1	7	18	14	7	4	2	0	60	25.07

* Water Year is the 12-month period beginning July 1 and ending June 30.
** Averages based on Climatological Normals 1960-1991
-- Less than one day.

NUMBER OF DAYS WITH MEASURABLE RAIN BY MONTH, WITH TOTAL PRECIPITATION FOR THE WATER YEAR*
(July 1877-June 1995)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	# of Days	Total Rain
Average**	--	--	2	4	8	9	10	8	9	5	2	1	59	18.61
1940-41	0	0	1	3	4	14	16	15	9	10	5	1	78	31.83
1941-42	0	0	0	3	6	17	13	8	5	13	5	0	70	24.94
1942-43	0	0	1	3	9	9	10	7	12	5	1	3	60	19.98
1943-44	0	0	0	3	6	8	8	13	4	10	3	3	58	17.58
1944-45	0	0	0	4	12	8	6	8	9	1	6	2	56	17.06
1945-46	0	0	0	6	8	12	4	8	10	1	2	0	51	13.91
1946-47	0	0	1	3	4	8	4	7	9	3	3	4	46	11.59
1947-48	0	0	0	6	4	6	4	7	9	16	6	1	59	15.44
1948-49	0	0	1	2	6	14	4	9	11	0	3	0	50	14.87
1949-50	0	1	1	1	4	9	15	7	8	6	2	1	55	14.31
1950-51	0	0	1	8	14	12	12	9	4	2	3	0	65	19.54
1951-52	0	0	2	5	11	12	14	11	11	4	1	3	74	26.58
1952-53	1	0	1	0	4	15	12	4	5	8	5	2	57	18.33
1953-54	0	1	0	3	11	3	10	7	10	4	1	0	50	15.54
1954-55	0	2	0	1	5	12	15	4	3	9	1	1	53	16.92
1955-56	0	0	2	2	7	19	17	7	3	6	6	0	69	27.74
1956-57	0	0	2	5	1	1	9	13	11	4	9	0	55	14.76
1957-58	0	0	2	7	5	10	14	15	17	6	2	2	80	31.94
1958-59	0	1	1	1	2	5	10	11	6	2	0	0	39	10.46
1959-60	0	0	3	0	1	3	12	9	11	5	2	0	46	12.28
1960-61	0	0	0	0	14	7	6	6	10	3	4	1	51	12.04
1961-62	0	1	1	2	5	5	2	15	5	2	2	1	41	15.26
1962-63	0	1	2	4	3	4	4	7	11	14	3	1	54	22.28
1963-64	0	0	2	6	12	4	8	2	6	1	5	4	50	11.04
1964-65	1	1	0	3	12	20	10	4	6	13	1	0	71	18.74
1965-66	0	2	0	1	11	8	5	9	3	3	2	0	44	11.58
1966-67	2	0	2	0	9	7	11	2	12	14	2	4	65	26.09
1967-68	0	0	1	2	7	6	10	10	7	1	2	1	47	11.17
1968-69	0	1	0	5	10	12	18	16	8	5	1	1	77	25.66
1969-70	0	0	2	2	3	11	19	6	5	1	0	2	51	17.71

* Water Year is the 12-month period beginning July 1 and ending June 30.
** Averages based on Climatological Normals 1960-1991
-- Less than one day.

NUMBER OF DAYS WITH MEASURABLE RAIN BY MONTH, WITH TOTAL PRECIPITATION FOR THE WATER YEAR*
(July 1877-June 1995)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	# of Days	Total Rain
Average**	--	--	2	4	8	9	10	8	9	5	2	1	59	18.61
1970-71	0	0	0	4	13	19	10	4	8	8	7	1	74	17.42
1971-72	0	0	0	2	5	13	6	8	5	6	3	1	49	10.34
1972-73	0	0	3	9	12	11	16	15	12	2	2	0	82	27.14
1973-74	0	0	3	4	15	13	13	6	11	8	0	1	74	22.83
1974-75	3	1	0	3	4	8	11	13	15	9	0	0	67	18.55
1975-76	0	2	0	7	7	8	1	8	4	4	0	1	42	7.25
1976-77	0	5	4	0	3	2	4	4	6	2	9	0	39	7.35
1977-78	1	0	4	4	3	14	16	9	11	9	0	0	71	25.36
1978-79	0	0	3	1	7	4	13	11	9	6	2	0	56	19.39
1979-80	1	0	1	6	7	8	13	13	7	5	2	1	63	24.79
1980-81	2	0	0	1	4	6	14	11	9	2	1	0	50	13.43
1981-82	0	0	1	7	12	13	10	4	15	8	0	2	72	32.65
1982-83	0	0	8	8	14	11	13	13	19	11	1	2	100	37.49
1983-84	0	1	3	4	14	17	4	9	4	4	1	2	63	17.40
1984-85	0	1	1	7	17	7	6	2	10	2	1	2	56	15.22
1985-86	0	1	4	2	12	9	15	12	8	5	3	0	71	29.75
1986-87	0	0	5	3	1	7	8	8	11	1	1	0	45	12.81
1987-88	0	0	0	6	8	15	12	2	1	5	3	3	55	15.37
1988-89	1	0	0	2	9	12	7	8	19	4	1	2	65	15.13
1989-90	0	2	5	4	2	0	11	7	5	3	8	0	47	19.40
1990-91	0	0	0	2	3	3	3	5	16	5	3	1	41	14.73
1991-92	0	1	1	2	2	7	9	17	11	2	0	2	54	16.68
1992-93	0	0	0	4	5	14	14	14	12	4	6	4	77	27.70
1993-94	0	0	0	5	7	7	8	9	1	4	4	0	45	13.02
1994-95	0	0	0	1	9	13	25	4	18	13	6	3	92	31.77
1995-96														
1996-97														
1997-98														
1998-99														
1999-00														

* Water Year is the 12-month period beginning July 1 and ending June 30.
** Averages based on Climatological Normals 1960-1991
-- Less than one day.

15 WETTEST WATER YEARS
(JULY 1849-JUNE 1995)

Rank	Amount	Year
1	37.49	1982-83
2	36.35	1852-53
3	36.10	1861-62
4	36.00	1849-50
5	33.80	1889-90
6	32.79	1867-68
7	32.65	1981-82
8	32.27	1885-86
9	31.94	1957-58
10	31.83	1940-41
11	31.77	1994-95
12	29.75	1985-86
13	27.74	1955-56
14	27.70	1992-93
15	26.58	1951-52

15 DRIEST WATER YEARS
(JULY 1849-JUNE 1995)

Rank	Amount	Year
1	7.25	1975-76
2	7.53	1976-77
3	7.79	1863-64
4	7.99	1923-24
5	8.03	1912-13
6	8.12	1932-33
7	8.26	1850-51
8	8.43	1930-31
9	8.47	1870-71
10	8.90	1919-20
11	9.19	1876-77
12	9.74	1938-39
13	9.95	1911-12
14	10.34	1971-72
15	10.39	1928-29

Water Year is the 12-month period beginning July 1 and ending June 30.

SNOWFALL
OCCURRENCES OF SNOW IN SACRAMENTO
(January 1878-March 1996)

Year	Date	Total Snow	Year	Date	Total Snow
1879	January 13	T	1933	January 18	T
1880	January 26	0.2	1935	March 8	T
1882	February 17, 18	T	1937	January 10, 11, 24, 30	T
1883	February 1, 6	T	1942	March 14	2.0
1888	January 4	1.0	1949	February 11	T
1888	January 5	2.5	1952	January 12	T
1888	January 16	0.5	1952	February 20	T
1896	March 2	T	1952	March 15	T
1899	February 2	T	1954	March 19	T
1907	January 6	0.4	1955	April 18,26	T
1911	February 26, 27	T	1957	January 25, 26	T
1911	December 29	T	1962	January 21	T
1913	January 9	0.1	1964	January 21	T
1916	January 1	3.0	1968	December 19, 20, 23	T
1916	January 27	0.5	1972	December 6, 12	T
1925	April 20	T	1974	January 4	T
1930	January 12	1.0	1976	February 5	2.0
1932	January 12	1.0	1982	March 17	T
1932	February 01	0.5	1988	December 27, 28	T
1932	December 9	T	1996	February 27	T

Snowfall data is based on the city office records from January 1878 through December 1950. Executive Airport data is used from then on.

Sleet and ice pellets were included in snowfall totals beginning July 1948. Ice pellets is a term that is internationally recognized and includes solid grains of ice (sleet) and particles consisting of snow pellets encased in a thin layer of ice.

"Snow" in April of 1925 and 1955 was actually a mixture of hail and sleet. The observer's weather log for April 20, 1925, indicated that there was a mixture of rain and sleet "...with an occasional flake of snow." The "Trace" recorded April 18, 1955, was during a brief hailstorm, with hail measuring one half-inch in diameter. Small hail was observed on April 26, 1955.

In most instances, snowfall at Sacramento is estimated as the snow usually melts as it reaches the ground.

GREATEST SNOWFALL DURING ANY 24 HOUR PERIOD
(January 1878-March 1996)

Month	Amount	Date	Year
January	3.5	04, 05	1888
February	2.0	05	1976
March	2.0	14	1942
April	T	18, 26	1955*
May	0		
June	0		
July	0		
August	0		
September	0		
October	0		
November	0		
December	T	27, 28	1988*
Annual	4.0	04, 05, 16	January 1888

AVERAGE AND GREATEST NUMBER OF DAYS WITH THUNDERSTORMS
BY MONTH WITH YEAR OF OCCURRENCE
(January 1948-March 1996)

Month	Average # Days with Tstms	Greatest # Days with Tstms	Year
January	0.4	3	1970
February	0.5	4	1992
March	0.8	4	1983
April	0.7	3	1967
May	0.3	3	1956
June	0.2	2	1989
July	0.2	2	1991*
August	0.2	2	1989*
September	0.5	2	1989*
October	0.3	2	1979*
November	0.3	3	1970
December	0.2	2	1970
Annual	4.7	10	1970*

* Also occurred in earlier years

Downtown Sacramento data used from January 1948-December 1962. Sacramento Executive Airport used thereafter. The average days with thunderstorms is based on airport data from 1948-1991.

IV. MISCELLANEOUS STATISTICS

including

RELATIVE HUMIDITY
SEA-LEVEL PRESSURE
SUNSHINE, CLOUDS AND FOG
WIND
HEATING AND COOLING DEGREE DAYS
WEATHER EXTREMES FOR SACRAMENTO AS COMPARED TO THE REST OF THE WORLD
NORMALS FOR SACRAMENTO

and

SUNRISE AND SUNSET TABLE
RAINFALL CHART

AVERAGE RELATIVE HUMIDITY BY TIME PERIODS

	4AM	10AM	4PM	10PM
January	90	85	70	86
February	87	78	59	81
March	85	69	53	77
April	81	58	43	73
May	81	50	35	69
June	78	47	31	64
July	76	47	28	61
August	78	50	29	64
September	77	50	31	64
October	80	57	38	70
November	86	74	58	81
December	90	84	70	86
Annual	82	62	45	73

Data based on the average humidities for the Sacramento Executive Airport (1961-1991).

AVERAGE SEA-LEVEL PRESSURE WITH THE HIGHEST AND LOWEST BY MONTH WITH DATE AND YEAR OF OCCURRENCE
(July 1877-November 1993)

Month	Average	Highest	Date	Year	Lowest	Date	Year
January	30.07	30.64	24	1938	28.95	27	1916
February	30.02	30.74	17	1883	29.15	22	1891
March	29.98	30.56	2	1971	29.20	01	1991
April	29.94	30.45	4	1945	29.37	22	1931
May	29.87	30.34	12	1890	29.50	17	1949
June	29.82	30.22	25	1975*	29.52	23	1989
July	29.81	30.21	12	1888	29.55	8	1926
August	29.81	30.19	4	1976	29.49	26	1932
September	29.82	30.19	19	1950*	29.44	12	1927
October	29.92	30.42	28	1921	29.42	24	1951
November	30.03	30.53	18	1969*	29.20	30	1982
December	30.07	30.67	25	1879	29.23	22	1982
Annual	29.93	30.74	Feb 17	1883	28.95	Jan 27	1916

Downtown Sacramento used until July 1, 1939. Executive Airport used until November 1993.
* Occurred on earlier dates and years.

SUNSHINE, CLOUDINESS AND FOG
(Sacramento Executive Airport 1949-1995)

	Sunshine	Sky Cover (Sunrise-Sunset)				Dense Fog		
	Percent Possible	Avg Amount of Sky	Avg Number of Days			Avg Number	Greatest Number of Days	
Month	Sunshine	Cover	Clear	Partly Cloudy	Cloudy	of Days	Days	Year
January	47%	7.0	6.6	6.0	18.4	10.1	23	1961
February	64%	6.2	8.0	6.9	13.3	5.3	13	1963*
March	73%	5.6	10.3	8.2	12.5	1.7	6	1986
April	82%	4.7	12.2	9.5	8.3	0.3	2	1965*
May	89%	3.5	17.4	8.3	5.2	0.2	2	1971
June	93%	2.2	21.8	5.8	2.4	0.0	0	----
July	97%	1.1	27.0	3.1	0.9	0.0	0	----
August	96%	1.5	25.4	4.2	1.3	0.0	1	1966
September	93%	1.8	23.5	4.2	2.3	0.2	2	1963
October	86%	3.2	19.4	6.1	5.5	1.4	11	1962
November	65%	5.7	10.0	7.0	13.0	5.3	11	1982
December	48%	6.7	8.0	5.8	17.2	9.6	22	1989*
Annual	78%	4.1	189.6	75.2	100.4	34.3	64	1962

* Also occurred other years prior.

Dense fog is when the visibility is restricted to 1/4 mile or less for at least part of the day. Sky Cover is expressed in a range from 0 - 10, with 0 standing for no clouds or obscuring phenomena, and 10 representing a complete sky cover. A further break-down is as follows:

Clear	0/10 to 3/10 sky cover
Partly Cloudy	4/10 to 7/10 sky cover
Cloudy	8/10 to 10/10 sky cover

GREATEST NUMBER OF CONSECUTIVE DAYS WITH DENSE FOG
DURING NOVEMBER, DECEMBER, JANUARY AND FEBRUARY
(November 1949-March 1996)

Days	Period	Year	Days	Period	Year
17	December 12-December 28	1985	9	January 17-January 25	1961
13	January 13-January 25	1975	9	November 25-December 3	1949
11	December 3-December 13	1962	9	February 3-February 11	1954
10	December 2-December 11	1977	8	February 3-February 10	1991
10	December 27, 1962-January 5	1963	8	December 23-December 30	1989
9	January 6-January 14	1986	8	January 29-February 5	1962
9	February 6-February 14	1971	8	December 14-December 21	1956
9	January 12-January 20	1965	8	December 14-December 21	1954

Only periods with 8 or more days are tabulated.

GREATEST NUMBER OF DAYS WITH DENSE FOG BY MONTHS
(Non-Consecutive)
(November 1949-March 1996)

Days	Period	Days	Period
23	January 1961	15	January 1975
22	December 1989	15	January 1972
22	December 1985	15	January 1965
20	December 1962	14	December 1986
19	December 1963	14	January 1986
19	January 1958	14	January 1983
18	January 1985	14	January 1964
16	December 1977	14	January 1963
16	January 1955	14	January 1962

Only periods with 14 or more days are tabulated.

Dense fog is defined as a heavy fog that restricts visibility to 1/4 mile or less during any period of the 24-hour day from midnight to midnight.

AVERAGE WIND SPEED, PREVAILING DIRECTION AND FASTEST MILE
BY MONTHS WITH DATE AND YEAR OF OCCURRENCE
(July 1877-December 1995)

Month	Average Speed*	Prevailing Direction	Fastest Mile	Direction	Date	Year
January	7.2	Southeast	60	Southeast	17	1954
February	7.6	S-Southeast	58	Southeast	9	1938
March	8.6	Southwest	66	South	14	1952
April	8.7	Southwest	45	Southwest	25	1955
May	9.2	Southwest	40	Southeast	6	1912
June	9.7	Southwest	47	Southwest	23	1950
July	9.0	S-Southwest	36	Southwest	12	1956
August	8.6	Southwest	38	Southwest	19	1954
September	7.5	Southwest	42	Northwest	16	1965
October	6.4	Southwest	68	Southeast	26	1950
November	6.0	N-Northwest	70	Southeast	13	1953
December	6.6	S-Southeast	70	Southeast	7	1952
Annual Average	7.9	Southwest				

*Average wind speed and direction is for the Executive Airport (1948-1990).

Wind extremes are the fastest 1-minute observed wind speed (in miles per hour). City office records were used from July 1877-January 1950. Executive airport wind data thereafter.

The "Fastest Mile" is the fastest 1-minute observed wind speed taken from a multiple register with a time-record of the passing of each mile of wind.

NOTE: Stronger peak gusts of wind have been observed but only as a sudden and brief increase in the wind speed, usually less than 20 seconds. An official record of the measurement of peak wind gusts requires the use of an instantaneous wind speed recorder. This type of instrument was not available for use in Sacramento during the period of record. A formula to derive the estimated peak gust from the fastest mile, according to the American Standard Association, is as follows:

Estimated Peak Gust = (Fastest Mile) x (1.3)

For example, the estimated peak gust with a fastest mile of 70 mph would be 91 mph, or

Estimated peak gust = (70) x (1.3) = 91 mph

NORMAL HEATING DEGREE DAYS WITH HIGHEST AND LOWEST
BY MONTHS AND YEAR OF OCCURRENCE

SACRAMENTO EXECUTIVE AIRPORT
(July 1960-June 1995)

Month	Normal*	Highest	Year	Lowest	Year
July	0	7	1974	0	Most
August	0	4	1964	0	Most
September	16	53	1986	0	1992**
October	78	191	1971	7	1983
November	351	532	1982	145	1981
December	611	749	1972	425	1983
January	614	736	1963	411	1986
February	400	496	1989	249	1963
March	357	449	1975	192	1986
April	230	456	1967	71	1990
May	80	187	1977	0	1992
June	12	40	1982	0	1987**
Season	2749	3149	1982-1983	2133	1983-1984

* Normals based on 1961-1990 temperature data.
** Also occurred on earlier months and years.

A heating degree day is a measure of the departure of the average daily temperature from 65 degrees. Each degree that the daily average temperature is below 65 degrees is equal to one degree day. For example, if the average daily temperature on a particular day was 55 degrees the heating degree day would then be:

Heating Degree Day = 65-55
= 10

Each day of the month would be computed in the same fashion with negative differences counted as zero.

NORMAL COOLING DEGREE DAYS WITH HIGHEST AND LOWEST
BY MONTHS AND YEAR OF OCCURRENCE

SACRAMENTO EXECUTIVE AIRPORT
(January 1969-December 1995)

Month	Normal*	Highest	Year	Lowest	Year
January	0	0	----	0	All
February	0	0	----	0	All
March	0	10	1986	0	Most
April	29	60	1989	0	1983**
May	89	183	1984	19	1977
June	210	319	1985	83	1982
July	332	484	1988	220	1987
August	313	409	1969	207	1980
September	211	375	1975	95	1986
October	53	208	1991	9	1982
November	0	8	1976	0	Most
December	0	0	----	0	All
Season	1237	1654	1975	737	1982

* Normals based on 1961-1990 temperature data.
** Also occurred on earlier months and years.

A cooling degree day is a measure of the departure of the base temperature of 65 degrees from the average daily temperature. Each degree that the average daily temperature is above 65 degrees is equal to one degree day. For example, if the average daily temperature on a particular day was 72 degrees, the cooling degree day would then be:

Cooling Degree Day = 72-65
= 7

Again, each day of the month would be computed with negative differences counted as zero.

Heating and cooling degree days are useful in the computation of fuel and power consumption and are used by utility companies to determine heating and cooling requirements.

WEATHER EXTREMES FOR SACRAMENTO AS COMPARED TO THOSE FOR CALIFORNIA, THE UNITED STATES, NORTH AMERICA AND THE WORLD

HIGHEST TEMPERATURE	° F	LOCATION AND DATE
Sacramento	114	July 17, 1925
California	134	Greenland Ranch (Death Valley)- July 10, 1913
United States	134	Greenland Ranch (Death Valley)- July 10, 1913
North America	134	Greenland Ranch (Death Valley)- July 10, 1913
World	136	Azizia, Tripolitania Libya, Africa- September 13, 1922

LOWEST TEMPERATURE	° F	LOCATION AND DATE
Sacramento	17	December 11, 1932
California	-45	Boca (Nevada County, Elev. 5532 Ft)- January 20, 1937
United States	-80	Prospect Creek (25 SE Bettles, Alaska)-January 23, 1971
North America	-81	Snag (Yukon Territory), Canada- Feb. 3, 1947
World	-129	Vostok, Antarctica (Elev. 11220 Ft)-July 21, 1983

GREATEST PRECIPITATION IN ONE HOUR (Inches)

Sacramento	1.65	April 7, 1935
California	4.41	Forni Ridge (El Dorado County, Elev. 7600 Ft)-June 18, 1982*
United States	12.00	Kilauea Sugar Plantation, Kauai, Hawaii-January 24-25, 1956 and also at Holt, Missouri-June 22, 1947
North America	12.00	Holt, Missouri-June 22, 1947
World	12.00	Same as the United States and North America

* This extreme rainfall event occurred between 4 p.m. and 5 p.m. during an intense thunderstorm. A rainfall rate of 1.81 inches in six minutes was registered during the height of the storm. Breaking the rainfall rates down even further during this storm, 3.07 inches fell in 18 minutes and 4.06 inches in a 27-minute period. Flooding and debris flow caused the closure of Highway 50 between Sacramento and Lake Tahoe for five hours. Forni Ridge is located approximately 65 miles east of Sacramento at the 7600 Ft elevation. Various record books list Campo (San Diego county, just north of the border) with 11.50 inches of rain in an 80-minute period, August 12, 1981.

WEATHER EXTREMES FOR SACRAMENTO AS COMPARED TO THOSE FOR CALIFORNIA, THE UNITED STATES, NORTH AMERICA AND THE WORLD

GREATEST PRECIPITATION IN 24 HOURS (Inches)

Sacramento	7.24	April 20-21, 1880
California	26.12	Hoegee's Camp Ivy (Los Angeles County, Elev.2750 Ft) January 22-23, 1943
United States	43.00	Alvin, Texas- July 25-26, 1979
North America	43.00	Alvin, Texas- July 25-26, 1979
World	73.62	Cilaos La Reunion (An island 400 miles east of Madagascar) March 15-16, 1952

GREATEST PRECIPITATION IN ONE CALENDAR MONTH (Inches)

Sacramento	15.04	January 1862
California	81.90	Camp Six (Del Norte County, Elev. 3778 Ft)-December 1981
United States	107.00	Puu Kukui, Maui, Hawaii- March 1942
North America	88.01	Swanson Bay, British Columbia- November 1917
World	366.14	Cherrapunji, India- July 1861

GREATEST PRECIPITATION IN ONE YEAR (Seasonal or Calendar Year)

Sacramento	37.49	Seasonal Year- July 1982-June 1983
California	254.90	Camp Six- October 1981-September 1982
United States	704.83	Puu Kukui, Maui, Hawaii- Calendar Year 1982
North America	332.29	Mac Leod Harbor, Alaska- Calendar Year 1976
World	905.12	Cherrapunji, India- Calendar Year 1861
	1041.78	Cherrapunji, India- August 1860-July 1861

LEAST PRECIPITATION IN ONE YEAR (Seasonal or Calendar Year)

Sacramento	4.71	Seasonal Year- July 1850-June 1851
California	0.00	Bagdad (San Bernardino County)- Calendar Year 1913
	0.00	Greenland Ranch (Death Valley)- Calendar Year 1929
United States	0.00	Same as California
North America	0.00	Same as California
World	0.00	Iquique, Chile- November 1945 thru May 1957
	0.00	Arica, Chile- October 1903 thru December 1917
	0.00	Kharga, Egypt- December 1957 thru March 1960
	0.00	Wadi Halfa, Sudan- June 1945 thru April 1949
	0.00	Bagdad (San Bernardino County)- Calendar Year 1913
	0.00	Greenland Ranch (Death Valley)- Calendar Year 1929

WEATHER EXTREMES FOR SACRAMENTO AS COMPARED TO THOSE FOR CALIFORNIA, THE UNITED STATES, NORTH AMERICA AND THE WORLD

GREATEST SNOWFALL IN 24 HOURS (Inches)

Sacramento	3.5	January 4-5, 1888
California	67.0	Echo Summit (Sierra Ski Ranch, El Dorado County, Elev. 7350 Ft)- January 5, 1982
United States	75.8	Silver Lake, Colorado- April 14-15, 1921
North America	75.8	Silver Lake, Colorado- April 14-15, 1921
World	----	Not Available

GREATEST SNOWFALL IN ONE CALENDAR MONTH (Inches)

Sacramento	4.0	January 1888
California	390.0	Tamarack (Alpine County, Elev. 8000 Ft)-January 1911
United States	390.0	Same as California
North America	390.0	Same as California
World	-----	Not Available

GREATEST SNOWFALL IN ONE SEASON (Inches)

Sacramento	4.0	1887-1888
California	884.0	Tamarack- 1906-1907
United States	1122.0	Rainier Paradise Ranger Station, Washington-1971-1972
North America	1122.0	Same as the United States
World	------	Not Available

GREATEST SNOW DEPTH (Inches)

Sacramento	3.0	January 1, 1911
California	451.0	Tamarack- March 11, 1911
United States	451.0	Same as California
North America	451.0	Same as California
World	-----	Not Available

LOWEST SEA LEVEL PRESSURE (Millibars/Inches)

Sacramento	980.4/28.95	January 27, 1916
California	975.6/28.81	Point Reyes- January 27, 1916
United States	892.3/26.35	Matecumbe Key, Florida- September 2, 1935
North America	892.3/26.35	Same as the United States
World	870.0/25.69	Measured by Dropsonde, 520 miles north- west of Guam in the eye of Typhoon "Tip", October 12, 1979

WEATHER EXTREMES FOR SACRAMENTO AS COMPARED TO THOSE FOR CALIFORNIA, THE UNITED STATES, NORTH AMERICA AND THE WORLD

HIGHEST SEA LEVEL PRESSURE (Millibars/Inches)

Sacramento	1041.0/30.74	February 17, 1883
California	1041.0/30.74	Sacramento- February 17, 1883
United States	1078.6/31.85	Northway Airport, Alaska- January 31, 1989
North America	1078.6/31.85	Northway Airport, Alaska- January 31, 1989
World	1083.8/32.01	Agata, Siberia USSR- December 31, 1968

HIGHEST WIND SPEED (Miles Per Hour)

Sacramento	70	*Fastest Mile- November 13, 1953 and December 7, 1952
California	115	Monterey Naval Air Station (Month and Date unknown) 1950
United States	231	Peak Gust- Mount Washington, New Hampshire- April 12, 1934
North America	231	Same as the United States
World	231	Same as the United States

* The Fastest Mile is the fastest one-minute observed wind speed taken from a multiple register with a time-record of the passing of each mile. Stronger peak gusts have been observed, but official records of peak wind gusts are not available.

NOTE:
Most information on Weather Extremes, other than the data for Sacramento, was extracted from the Weather Bureau Western Region Technical Memorandum WR-28, entitled WEATHER EXTREMES, by Robert J. Schmidli, dated April 1968 (Revised October 1991).

Temperature, precipitation or other extremes of any place on the surface of the earth are determined by a number of factors. Important among these are altitude, latitude, and the physical characteristics of the surface. For an extreme to be recorded, an observation must be made at the precise time and place of occurrence. There is little doubt that more extreme values have occurred than have been recorded, not only because of relatively short periods of record for many observing stations, but also because the very areas where extremes do occur are often the most sparsely settled.

NORMALS
DOWNTOWN SACRAMENTO

1961 to 1990

Latitude:	38 35N
Longitude:	121 30W
Elevation:	84 Ft

The daily values presented in these tables are not simple means of observed daily values. They are interpolated from the much less variable monthly normals by use of the natural spline function.

In leap years use the February 28th values for the 29th and adjust the degree day monthly totals accordingly.

Daily precipitation normals were also computed using the natural spline function and do not exhibit the typical daily random patterns. However, they may be used to compute normal precipitation over time intervals.

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

JANUARY

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	52	39	46	19	0	.11	7.45
2	52	39	46	19	0	.11	7.56
3	52	39	46	19	0	.11	7.67
4	52	39	46	19	0	.11	7.78
5	52	39	46	19	0	.12	7.90
6	52	39	46	19	0	.12	8.02
7	53	39	46	19	0	.12	8.14
8	53	39	46	19	0	.12	8.26
9	53	39	46	19	0	.12	8.38
10	53	39	46	19	0	.12	8.50
11	53	40	46	19	0	.12	8.62
12	53	40	46	19	0	.13	8.75
13	53	40	46	19	0	.13	8.88
14	53	40	46	19	0	.13	9.01
15	53	40	46	19	0	.13	9.14
16	54	40	47	18	0	.13	9.27
17	54	40	47	18	0	.13	9.40
18	54	40	47	18	0	.13	9.53
19	54	40	47	18	0	.13	9.66
20	54	40	47	18	0	.13	9.79
21	55	40	47	18	0	.13	9.92
22	55	41	48	17	0	.13	10.05
23	55	41	48	17	0	.13	10.18
24	56	41	48	17	0	.13	10.31
25	56	41	48	17	0	.13	10.44
26	56	41	49	16	0	.13	10.57
27	56	41	49	16	0	.13	10.70
28	57	41	49	16	0	.13	10.83
29	57	42	49	16	0	.12	10.95
30	57	42	50	15	0	.12	11.07
31	58	42	50	15	0	.12	11.19
TOTAL				555	0	3.85	
AVG	54.1	40.1	47.1				

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

FEBRUARY

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	58	42	50	15	0	.12	11.31
2	58	42	50	15	0	.12	11.43
3	59	43	51	14	0	.12	11.55
4	59	43	51	14	0	.12	11.67
5	60	43	51	14	0	.11	11.78
6	60	43	51	14	0	.11	11.89
7	60	43	52	13	0	.11	12.00
8	60	43	52	13	0	.11	12.11
9	61	43	52	13	0	.11	12.22
10	61	44	52	13	0	.11	12.33
11	61	44	53	12	0	.11	12.44
12	61	44	53	12	0	.11	12.55
13	62	44	53	12	0	.11	12.66
14	62	44	53	12	0	.11	12.77
15	62	44	53	12	0	.10	12.87
16	62	44	53	12	0	.10	12.97
17	63	44	54	11	0	.10	13.07
18	63	45	54	11	0	.10	13.17
19	63	45	54	11	0	.10	13.27
20	63	45	54	11	0	.10	13.37
21	63	45	54	11	0	.10	13.47
22	63	45	54	11	0	.10	13.57
23	64	45	54	11	0	.10	13.67
24	64	45	54	11	0	.10	13.77
25	64	45	54	11	0	.10	13.87
26	64	45	55	10	0	.10	13.97
27	64	45	55	10	0	.10	14.07
28	64	45	55	10	0	.10	14.17
TOTAL				339	0	2.98	
AVG	61.7	44.0	52.9				

In leap years use the February 28 values for February 29.

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

MARCH

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	64	45	55	10	0	.10	14.27
2	64	45	55	10	0	.10	14.37
3	64	45	55	10	0	.10	14.47
4	64	45	55	10	0	.10	14.57
5	64	45	55	10	0	.10	14.67
6	65	45	55	10	0	.10	14.77
7	65	45	55	10	0	.10	14.87
8	65	46	55	10	0	.10	14.97
9	65	46	55	10	0	.10	15.07
10	65	46	55	10	0	.10	15.17
11	65	46	55	10	0	.10	15.27
12	65	46	56	9	0	.10	15.37
13	65	46	56	9	0	.10	15.47
14	66	46	56	9	0	.09	15.56
15	66	46	56	9	0	.09	15.65
16	66	46	56	9	0	.09	15.74
17	66	46	56	9	0	.09	15.83
18	66	46	56	9	0	.09	15.92
19	66	46	56	9	0	.09	16.01
20	67	46	56	9	0	.09	16.10
21	67	46	56	9	0	.09	16.19
22	67	46	57	9	0	.09	16.28
23	67	46	57	8	0	.08	16.36
24	67	46	57	8	0	.08	16.44
25	68	47	57	8	0	.08	16.52
26	68	47	57	8	0	.08	16.60
27	68	47	57	8	0	.08	16.68
28	68	47	57	8	0	.07	16.75
29	68	47	58	8	0	.07	16.82
30	68	47	58	8	0	.07	16.89
31	68	47	58	8	0	.07	16.96
TOTAL				281	0	2.79	
AVG	66.1	46.0	56.1				

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

APRIL

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	69	47	58	7	0	.07	17.03
2	69	47	58	7	0	.07	17.10
3	70	47	58	7	0	.06	17.16
4	70	47	59	7	1	.06	17.22
5	70	47	59	7	1	.06	17.28
6	70	48	59	7	1	.06	17.34
7	71	48	59	7	1	.05	17.39
8	71	48	59	7	1	.05	17.44
9	71	48	60	6	1	.05	17.49
10	71	48	60	6	1	.05	17.54
11	72	48	60	6	1	.05	17.59
12	72	48	60	6	1	.05	17.64
13	72	48	60	6	1	.04	17.68
14	72	48	60	6	1	.04	17.72
15	73	49	61	6	2	.04	17.76
16	73	49	61	6	2	.04	17.80
17	73	49	61	6	2	.04	17.84
18	73	49	61	6	2	.04	17.88
19	74	49	61	6	2	.03	17.91
20	74	49	62	5	2	.03	17.94
21	74	49	62	5	2	.03	17.97
22	74	49	62	5	2	.03	18.00
23	75	50	62	5	2	.03	18.03
24	75	50	62	5	2	.03	18.06
25	75	50	63	4	2	.03	18.09
26	76	50	63	4	2	.03	18.12
27	76	50	63	4	2	.02	18.14
28	76	50	63	4	2	.02	18.16
29	76	51	64	4	3	.02	18.18
30	77	51	64	4	3	.02	18.20
TOTAL				171	45	1.24	
AVG	72.8	48.7	60.8				

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

MAY

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	77	51	64	4	3	.02	18.22
2	77	51	64	4	3	.02	18.24
3	78	51	64	4	3	.02	18.26
4	78	51	65	3	3	.02	18.28
5	78	52	65	3	3	.02	18.30
6	78	52	65	3	3	.01	18.31
7	79	52	65	3	3	.01	18.32
8	79	52	66	3	4	.01	18.33
9	79	52	66	3	4	.01	18.34
10	79	52	66	3	4	.01	18.35
11	80	53	66	3	4	.01	18.36
12	80	53	67	2	4	.01	18.37
13	80	53	67	2	4	.01	18.38
14	80	53	67	2	4	.01	18.39
15	81	53	67	2	4	.01	18.40
16	81	53	67	2	4	.01	18.41
17	81	54	67	2	4	.01	18.42
18	82	54	68	2	5	.01	18.43
19	82	54	68	2	5	.01	18.44
20	82	54	68	2	5	.01	18.45
21	82	54	68	2	5	.01	18.46
22	82	54	68	2	5	.01	18.47
23	83	55	69	1	5	.01	18.48
24	83	55	69	1	5	.01	18.49
25	83	55	69	1	5	0	18.49
26	83	55	69	1	5	0	18.49
27	84	55	70	1	6	0	18.49
28	84	55	70	1	6	0	18.49
29	84	55	70	1	6	0	18.49
30	84	56	70	1	6	0	18.49
31	85	56	70	1	6	0	18.49
TOTAL				67	136	.29	
AVG	80.9	53.4	67.2				

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

JUNE

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	85	56	70	1	6	.01	18.50
2	85	56	71	1	7	.01	18.51
3	85	56	71	1	7	.01	18.52
4	86	56	71	1	7	.01	18.53
5	86	57	71	1	7	.01	18.54
6	86	57	71	1	7	.01	18.55
7	86	57	71	1	7	.01	18.56
8	86	57	71	1	7	.01	18.57
9	86	57	71	1	7	.01	18.58
10	87	57	72	0	7	.01	18.59
11	87	58	73	0	8	.01	18.60
12	87	58	73	0	8	.01	18.61
13	88	58	73	0	8	0	18.61
14	88	58	73	0	8	0	18.61
15	88	58	73	0	8	0	18.61
16	88	58	73	0	8	0	18.61
17	88	58	73	0	8	0	18.61
18	89	58	74	0	9	0	18.61
19	89	58	74	0	9	0	18.61
20	89	59	74	0	9	0	18.61
21	89	59	74	0	9	0	18.61
22	90	59	74	0	9	0	18.61
23	90	59	74	0	9	0	18.61
24	90	59	74	0	10	0	18.61
25	90	59	75	0	10	0	18.61
26	90	59	75	0	10	0	18.61
27	91	59	75	0	10	0	18.61
28	91	59	75	0	10	0	18.61
29	91	59	75	0	10	0	18.61
30	91	59	75	0	10	0	18.61
TOTAL				9	249	.12	
AVG	88.1	57.9	73.0				

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

JULY

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	92	59	76	0	11	.01	.01
2	92	60	76	0	11	.01	.02
3	92	60	76	0	11	.01	.03
4	92	60	76	0	11	.01	.04
5	92	60	76	0	11	.01	.05
6	92	60	76	0	11	0	.05
7	93	60	77	0	12	0	.05
8	93	60	77	0	12	0	.05
9	93	60	77	0	12	0	.05
10	93	60	77	0	12	0	.05
11	93	60	77	0	12	0	.05
12	93	60	77	0	12	0	.05
13	93	60	77	0	12	0	.05
14	94	60	77	0	12	0	.05
15	94	60	77	0	12	0	.05
16	94	60	77	0	12	0	.05
17	94	60	77	0	12	0	.05
18	94	60	77	0	12	0	.05
19	94	61	77	0	12	0	.05
20	94	61	77	0	12	0	.05
21	94	61	77	0	12	0	.05
22	94	61	77	0	12	0	.05
23	94	61	78	0	13	0	.05
24	94	61	78	0	13	0	.05
25	94	61	78	0	13	0	.05
26	94	61	77	0	12	0	.05
27	94	61	77	0	12	0	.05
28	94	61	77	0	12	0	.05
29	94	61	77	0	12	0	.05
30	94	61	77	0	12	0	.05
31	94	61	77	0	12	0	.05
TOTAL				0	369	.05	
AVG	93.4	60.4	76.9				

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

AUGUST

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	94	61	77	0	12	0	.05
2	94	61	77	0	12	0	.05
3	93	61	77	0	12	0	.05
4	93	61	77	0	12	0	.05
5	93	61	77	0	12	0	.05
6	93	61	77	0	12	0	.05
7	93	61	77	0	12	0	.05
8	93	61	77	0	12	0	.05
9	93	61	77	0	12	0	.05
10	93	60	77	0	12	0	.05
11	93	60	77	0	12	0	.05
12	93	60	77	0	12	0	.05
13	92	60	76	0	11	0	.05
14	92	60	76	0	11	0	.05
15	92	60	76	0	11	0	.05
16	92	60	76	0	11	0	.05
17	92	60	76	0	11	0	.05
18	92	60	76	0	11	0	.05
19	92	60	76	0	11	0	.05
20	92	60	76	0	11	0	.05
21	92	60	76	0	11	0	.05
22	91	60	76	0	11	0	.05
23	91	60	76	0	11	0	.05
24	91	60	76	0	11	0	.05
25	91	60	76	0	11	.01	.06
26	91	60	75	0	10	.01	.07
27	91	60	75	0	10	.01	.08
28	91	60	75	0	10	.01	.09
29	91	60	75	0	10	.01	.10
30	91	60	75	0	10	.01	.11
31	90	60	75	0	10	.01	.12
TOTAL				0	347	.07	
AVG	92.1	60.3	76.2				

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

SEPTEMBER

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	90	60	75	0	10	.01	.13
2	90	60	75	0	10	.01	.14
3	90	60	75	0	10	.01	.15
4	90	59	75	0	10	.01	.16
5	90	59	75	0	10	.01	.17
6	90	59	74	0	9	.01	.18
7	89	59	74	0	9	.01	.19
8	89	59	74	0	9	.01	.20
9	89	59	74	0	9	.01	.21
10	89	59	74	0	9	.01	.22
11	89	59	74	0	9	.01	.23
12	89	59	74	0	9	.01	.24
13	88	59	74	0	9	.01	.25
14	88	59	73	0	8	.01	.26
15	88	59	73	0	8	.01	.27
16	88	58	73	0	8	.01	.28
17	88	58	73	0	8	.01	.29
18	87	58	73	0	8	.01	.30
19	87	58	73	0	8	.01	.31
20	87	58	73	0	8	.01	.32
21	87	58	72	1	8	.01	.33
22	86	58	72	1	8	.01	.34
23	86	57	72	1	8	.01	.35
24	86	57	72	1	8	.02	.37
25	86	57	71	1	7	.02	.39
26	86	57	71	1	7	.02	.41
27	85	57	71	1	7	.02	.43
28	85	57	71	1	7	.02	.45
29	84	57	70	1	6	.02	.47
30	84	56	70	1	6	.02	.49
TOTAL				10	250	.37	
AVG	87.7	58.3	73.0				

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

OCTOBER

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	84	56	70	1	6	.02	.51
2	84	56	70	1	6	.02	.53
3	84	56	70	1	6	.02	.55
4	83	56	69	1	5	.02	.57
5	83	55	69	1	5	.02	.59
6	83	55	69	1	5	.02	.61
7	82	55	69	1	5	.02	.63
8	82	55	68	1	4	.02	.65
9	82	55	68	1	4	.02	.67
10	81	54	68	1	4	.02	.69
11	81	54	68	1	4	.02	.71
12	80	54	67	1	3	.02	.73
13	80	54	67	1	3	.03	.76
14	80	54	67	1	3	.03	.79
15	79	53	66	2	3	.03	.82
16	79	53	66	2	3	.03	.85
17	78	53	66	2	3	.03	.88
18	78	53	65	2	2	.04	.92
19	78	53	65	2	2	.04	.96
20	77	52	64	3	2	.04	1.00
21	77	52	64	3	2	.04	1.04
22	76	52	64	3	2	.04	1.08
23	76	52	64	3	2	.05	1.13
24	75	51	63	4	2	.05	1.18
25	75	51	63	4	2	.05	1.23
26	74	51	63	4	2	.06	1.29
27	74	51	62	4	1	.06	1.35
28	73	50	62	4	1	.06	1.41
29	72	50	61	5	1	.06	1.47
30	72	50	61	5	1	.07	1.54
31	71	50	61	5	1	.07	1.61
TOTAL				71	95	1.12	
AVG	78.5	53.1	65.8				

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

NOVEMBER

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	71	49	60	5	0	.07	1.68
2	70	49	60	5	0	.08	1.76
3	70	49	59	6	0	.08	1.84
4	69	49	59	6	0	.08	1.92
5	69	48	59	6	0	.09	2.01
6	68	48	58	7	0	.09	2.10
7	68	48	58	7	0	.09	2.19
8	67	48	57	8	0	.09	2.28
9	66	48	57	8	0	.10	2.38
10	66	47	57	8	0	.10	2.48
11	65	47	56	9	0	.10	2.58
12	65	47	56	9	0	.10	2.68
13	65	47	56	9	0	.10	2.78
14	64	46	55	10	0	.10	2.88
15	64	46	55	10	0	.11	2.99
16	63	46	55	10	0	.11	3.10
17	63	46	54	11	0	.11	3.21
18	62	45	54	11	0	.11	3.32
19	62	45	54	11	0	.11	3.43
20	61	45	53	12	0	.11	3.54
21	61	45	53	12	0	.11	3.65
22	61	44	53	12	0	.11	3.76
23	60	44	52	13	0	.11	3.87
24	60	44	52	13	0	.11	3.98
25	59	44	52	13	0	.10	4.08
26	59	44	51	14	0	.10	4.18
27	59	43	51	14	0	.10	4.28
28	58	43	51	14	0	.10	4.38
29	58	43	50	15	0	.10	4.48
30	58	43	50	15	0	.10	4.58
TOTAL				303	0	2.97	
AVG	63.7	46.0	54.9				

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

DECEMBER

	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
DATE	MAX	MIN	AVG	HDD	CDD	DAILY	SEASON
1	58	42	50	15	0	.10	4.68
2	57	42	50	15	0	.09	4.77
3	57	42	49	16	0	.09	4.86
4	56	42	49	16	0	.09	4.95
5	56	42	49	16	0	.09	5.04
6	56	41	49	16	0	.09	5.13
7	56	41	48	17	0	.09	5.22
8	55	41	48	17	0	.09	5.31
9	55	41	48	17	0	.09	5.40
10	55	41	48	17	0	.08	5.48
11	54	41	47	18	0	.08	5.56
12	54	40	47	18	0	.08	5.64
13	54	40	47	18	0	.08	5.72
14	54	40	47	18	0	.08	5.80
15	54	40	47	18	0	.08	5.88
16	54	40	47	18	0	.08	5.96
17	53	40	46	19	0	.08	6.04
18	53	40	46	19	0	.08	6.12
19	53	40	46	19	0	.09	6.21
20	53	40	46	19	0	.09	6.30
21	53	40	46	19	0	.09	6.39
22	53	39	46	19	0	.09	6.48
23	53	39	46	19	0	.09	6.57
24	53	39	46	19	0	.09	6.66
25	53	39	46	19	0	.09	6.75
26	52	39	46	19	0	.09	6.84
27	52	39	46	19	0	.10	6.94
28	52	39	46	19	0	.10	7.04
29	52	39	46	19	0	.10	7.14
30	52	39	46	19	0	.10	7.24
31	52	39	46	19	0	.10	7.34
TOTAL				555	0	2.76	
AVG	54.0	40.2	47.1				

NORMALS
DOWNTOWN SACRAMENTO
1961 to 1990

Latitude: 38 35N
Longitude: 121 30W
Elevation: 84 Ft

	TEMPERATURE			DEGREE DAY		
	MAX	MIN	AVG	HDD	CDD	PCPN
ANNUAL	74.4	50.7	62.6	2361	1491	18.61

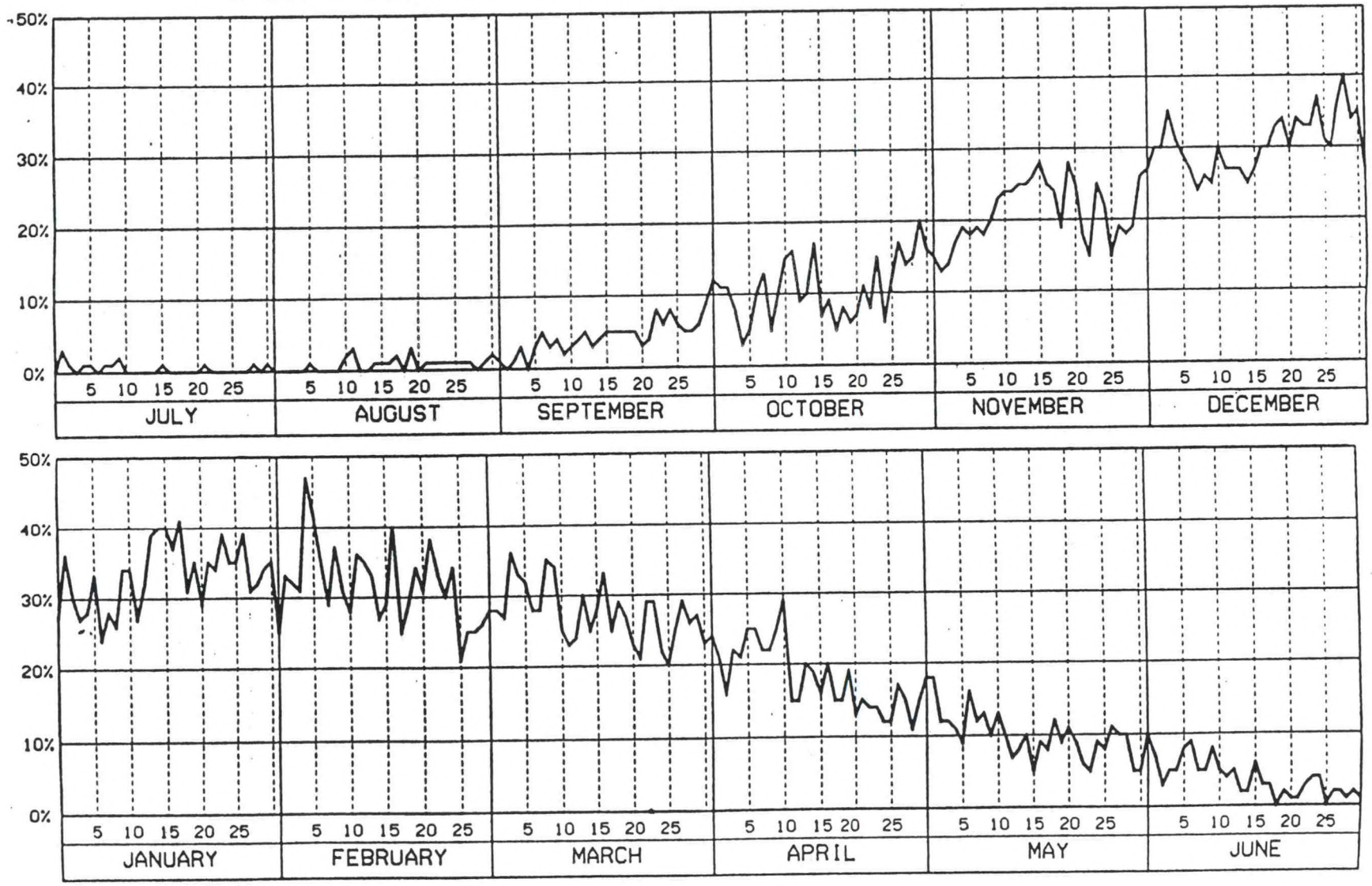
	TEMPERATURE			DEGREE DAY		
SEASON	MAX	MIN	AVG	HDD	CDD	PCPN
Winter	56.5	41.4	49.0	1449	0	9.59
Spring	73.3	49.4	61.4	519	181	4.32
Summer	91.3	59.6	75.4	9	965	.24
Fall	76.7	52.5	64.6	384	345	4.46

Winter = December, January, February
Spring = March, April, May
Summer = June, July, August
Fall = September, October, November

	TEMPERATURE			DEGREE DAY		
MONTH	MAX	MIN	AVG	HDD	CDD	PCPN
January	54.1	40.1	47.1	555	0	3.85
February	61.7	44.0	52.9	339	0	2.98
March	66.1	46.0	56.1	281	0	2.79
April	72.8	48.7	60.8	171	45	1.24
May	80.9	53.4	67.2	67	136	.29
June	88.1	57.9	73.0	9	249	.12
July	93.4	60.4	76.9	0	369	.05
August	92.1	60.3	76.2	0	347	.07
September	87.7	58.3	73.0	10	250	.37
October	78.5	53.1	65.8	71	95	1.12
November	63.7	46.0	54.9	303	0	2.97
December	54.0	40.2	47.1	555	0	2.76

RAINFALL CHART

PROBABILITY OF RAIN (BY PERCENTAGE) ON ANY GIVEN DAY,
BASED ON NATIONAL WEATHER SERVICE RECORDS FOR DOWNTOWN SACRAMENTO
(PRECIPITATION 0.01 INCHES OR MORE, BASED ON RECORDS FROM 1878-1987)



Location: W121° 28', N38° 34'

Sacramento, California
Rise and Set for the Sun for ANY YEAR

Pacific Standard Time

Astronomical Applications Dept.
U.S. Naval Observatory
Washington, D.C. 20392-5420

Day	Jan. Rise	Jan. Set	Feb. Rise	Feb. Set	Mar. Rise	Mar. Set	Apr. Rise	Apr. Set	May Rise	May Set	June Rise	June Set	July Rise	July Set	Aug. Rise	Aug. Set	Sept. Rise	Sept. Set	Oct. Rise	Oct. Set	Nov. Rise	Nov. Set	Dec. Rise	Dec. Set
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
01	0724	1656	0711	1728	0638	1759	0551	1829	0509	1858	0443	1924	0445	1934	0507	1916	0535	1836	0602	1749	0632	1706	0705	1645
02	0724	1656	0711	1729	0637	1800	0549	1830	0508	1859	0443	1925	0446	1934	0508	1915	0536	1834	0603	1747	0634	1705	0706	1645
03	0724	1657	0710	1730	0635	1801	0548	1831	0506	1900	0443	1926	0446	1934	0509	1914	0537	1833	0603	1746	0635	1704	0706	1645
04	0724	1658	0709	1731	0634	1802	0546	1832	0505	1901	0442	1926	0447	1934	0510	1913	0538	1831	0604	1744	0636	1703	0707	1645
05	0724	1659	0708	1733	0632	1803	0545	1833	0504	1901	0442	1927	0447	1933	0511	1912	0539	1830	0605	1743	0637	1702	0708	1645
06	0724	1700	0707	1734	0631	1804	0543	1834	0503	1902	0442	1927	0448	1933	0512	1911	0539	1828	0606	1741	0638	1701	0709	1645
07	0724	1701	0706	1735	0629	1805	0542	1835	0502	1903	0442	1928	0448	1933	0513	1910	0540	1827	0607	1739	0639	1700	0710	1645
08	0724	1702	0705	1736	0628	1806	0540	1836	0501	1904	0441	1929	0449	1933	0514	1909	0541	1825	0608	1738	0640	1659	0711	1645
09	0724	1703	0704	1737	0626	1807	0539	1837	0500	1905	0441	1929	0450	1932	0515	1907	0542	1824	0609	1736	0641	1658	0712	1645
10	0723	1704	0702	1738	0625	1808	0537	1838	0459	1906	0441	1930	0450	1932	0515	1906	0543	1822	0610	1735	0642	1657	0713	1645
11	0723	1705	0701	1739	0623	1809	0536	1839	0458	1907	0441	1930	0451	1931	0516	1905	0544	1820	0611	1734	0643	1656	0713	1645
12	0723	1706	0700	1740	0622	1810	0534	1840	0457	1908	0441	1931	0452	1931	0517	1904	0545	1819	0612	1732	0644	1655	0714	1645
13	0723	1707	0659	1742	0620	1811	0533	1841	0456	1909	0441	1931	0452	1931	0518	1903	0546	1817	0613	1731	0646	1654	0715	1645
14	0722	1708	0658	1743	0619	1812	0531	1842	0455	1910	0441	1931	0453	1930	0519	1901	0546	1816	0614	1729	0647	1654	0716	1646
15	0722	1709	0657	1744	0617	1813	0530	1842	0454	1911	0441	1932	0454	1929	0520	1900	0547	1814	0615	1728	0648	1653	0716	1646
16	0722	1710	0655	1745	0616	1814	0528	1843	0453	1912	0441	1932	0454	1929	0521	1859	0548	1812	0616	1726	0649	1652	0717	1646
17	0721	1711	0654	1746	0614	1815	0527	1844	0452	1912	0441	1932	0455	1928	0522	1857	0549	1811	0617	1725	0650	1651	0718	1646
18	0721	1712	0653	1747	0613	1816	0526	1845	0452	1913	0441	1933	0456	1928	0523	1856	0550	1809	0618	1724	0651	1651	0718	1647
19	0720	1713	0652	1748	0611	1817	0524	1846	0451	1914	0441	1933	0457	1927	0524	1855	0551	1808	0619	1722	0652	1650	0719	1647
20	0720	1714	0650	1749	0609	1818	0523	1847	0450	1915	0442	1933	0457	1926	0524	1853	0552	1806	0620	1721	0653	1650	0719	1648
21	0719	1715	0649	1750	0608	1819	0522	1848	0449	1916	0442	1933	0458	1926	0525	1852	0553	1804	0621	1719	0654	1649	0720	1648
22	0719	1717	0648	1751	0606	1820	0520	1849	0449	1917	0442	1934	0459	1925	0526	1851	0553	1803	0622	1718	0655	1648	0720	1649
23	0718	1718	0646	1753	0605	1821	0519	1850	0448	1918	0442	1934	0500	1924	0527	1849	0554	1801	0623	1717	0656	1648	0721	1649
24	0718	1719	0645	1754	0603	1822	0517	1851	0447	1918	0442	1934	0501	1923	0528	1848	0555	1800	0624	1716	0657	1647	0721	1650
25	0717	1720	0644	1755	0602	1823	0516	1852	0447	1919	0443	1934	0502	1923	0529	1846	0556	1758	0625	1714	0659	1647	0722	1650
26	0716	1721	0642	1756	0600	1824	0515	1853	0446	1920	0443	1934	0502	1922	0530	1845	0557	1757	0626	1713	0700	1647	0722	1651
27	0716	1722	0641	1757	0559	1824	0514	1854	0446	1921	0443	1934	0503	1921	0531	1843	0558	1755	0627	1712	0701	1646	0722	1652
28	0715	1723	0640	1758	0557	1825	0512	1855	0445	1921	0444	1934	0504	1920	0532	1842	0559	1753	0628	1711	0702	1646	0723	1652
29	0714	1725	0638	1759	0555	1826	0511	1856	0445	1922	0444	1934	0505	1919	0532	1840	0600	1752	0629	1709	0703	1646	0723	1653
30	0713	1726			0554	1827	0510	1857	0444	1923	0445	1934	0506	1918	0533	1839	0601	1750	0630	1708	0704	1645	0723	1654
31	0712	1727			0552	1828			0444	1924			0507	1917	0534	1837			0631	1707			0723	1655

Add one hour for daylight time, if and when in use.
This table may be used for the remainder of the century with an error not exceeding 2 minutes.

144 Arizona Cool Season Climatological Surface Wind and Pressure Gradient Study. Ira S. Brenner, May 1979. (PB298900/AS)
146 The BART Experiment. Morris S. Webb, October 1979. (PB80 155112)
147 Occurrence and Distribution of Flash Floods in the Western Region. Thomas L. Dietrich, December 1979. (PB80 160344)
149 Misinterpretations of Precipitation Probability Forecasts. Allan H. Murphy, Sarah Lichtenstein, Baruch Fischhoff, and Robert L. Winkler, February 1980. (PB80 174576)
150 Annual Data and Verification Tabulation - Eastern and Central North Pacific Tropical Storms and Hurricanes 1979. Emil B. Gunther and Staff, EPHC, April 1980. (PB80 220486)
151 NMC Model Performance in the Northeast Pacific. James E. Overland, PMEL-ERL, April 1980. (PB80 196033)
152 Climate of Salt Lake City, Utah. William J. Alder, Sean T. Buchanan, William Cope (Retired), James A. Cisco, Craig C. Schmidt, Alexander R. Smith (Retired), Wilbur E. Figgins (Retired), April 1996 - Sixth Revision (PB96 175583)
153 An Automatic Lightning Detection System in Northern California. James E. Rea and Chris E. Fontana, June 1980. (PB80 225592)
154 Regression Equation for the Peak Wind Gust 6 to 12 Hours in Advance at Great Falls During Strong Downslope Wind Storms. Michael J. Oard, July 1980. (PB91 108367)
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