NOAA Technical Memorandum NWS WR-65 (Revised)

CLIMATE OF SACRAMENTO, CALIFORNIA

Sacramento National Weather Service Office
January 1988

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CONTENTS

CONTENTS (Continued)

VI. Precipitation Records

VII. Miscellaneous Statistics

CONTENTS (Continued)

VII. Miscellaneous Statistics (Continued) Page

CLIMATE OF SACRAMENTO, CALIFORNIA

I. NARRATIVE CLIMATOLOGICAL SUMMARY.

Sacramento and the lower Sacramento Valley 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 of the total annual precipitation falls, yet rain in measurable amounts occurs only on about 10 days monthly during the winter. Mountains surround the 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 are rare in the valley.

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 junction of the Sacramento and San Joaquin Rivers. No other tidewater gap exists in the coastal mountains to admit 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 dynamically as it descends, reaching the valley floor as a hot, dry north wind. Heat waves in the summer are produced by these disagreeable winds and, fortunately, are followed within two or three days by the normally cool southerly breezes, especially at night.

Summer nights in the lower Sacramento Valley are usually cool and invigorating. This is primarily the result of the refreshing breezes blowing up from the Bay Area 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, or no breeze at all.

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 this valley during the summer should be considered when comparing temperatures here with those of cities in more humid regions.

Thunderstorms are few in number. Snowfall 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 come 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, and vegetables, ranging from the semi-tropical to the hardier varieties.

II. A HISTORY OF WEATHER OBSERVATIONS AT SACRAMENTO, CALIFORNIA

The first Governmental-type 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 more scientific, high-tech 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.

Office Locations (Cont'd)

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

9th and I Streets (New Post Office and Court House 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 present.

As the complexity of living changed over the past century, so did the services provided by the Sacramento weather office. The local forecasts now consist of the Sacramento area as well as the foothills of the Sierra Nevada. Special tailor-made forecasts for agriculture, forestry, hydrology and recreation are also provided.

The commissioning of the Weather Radar on February 2, 1960, added a valuable tool for more precise, short-range weather forecasts. Used in conjunction with satellite data, radar can detect the small-scale weather features that are required to provide operational data for flood control and forestry operations, to name a few.

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 that are made daily, world-wide, all combine to work toward a successful answer to the very basic question: "What's the weather going to be?".

III. SOME HIGHLIGHTS OF THE WEATHER RECORDS IN SACRAMENTO

The National Weather Service in Sacramento has put together some facts regarding extreme weather conditions recorded in the past in the Capitol City. Official observations have been taken in the downtown area since July 1, 1877. The following statistics are a few facts of the extreme conditions recorded since then.

The all-time downtown high temperature 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 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 period of extremely hot days (105 degrees or higher) occurred in June, 1985. From the 11th through the 16th, Sacramento sizzled with six-consecutive days of maximum temperatures of 105 degrees or above.

The greatest number of consecutive days with temperatures 100 degrees or higher is nine. This has happened three times since temperature records began in July 1877:

August 1 through August 9, 1966,
June 19 through June 27, 1981 and
July 10 through July 18, 1984.

Other heat waves having one-or two-day breaks between consecutive 100 degree-plus days have taken place in the past. Two that stand out significantly occurred during the summers of 1929 and 1980. During 1929, 100 degree-plus temperatures 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 saw temperatures of 99 degrees, and 91 degrees, respectively. In all, there were 14 out of 16 days with maximum temperatures 100 degrees or higher.

In 1980, 100 degree-plus days were observed from July 21 through July 27, and again from July 29 through August 1. The one-day break on the 28th saw clouds and scattered light showers hold the maximum temperature to only 95 degrees. All in all, there were 11 out of 12 days with maximum temperatures of 100 degrees or higher during this heat wave.

The coldest temperature ever recorded in the downtown area was on December 11, 1932, with a low of 17 degrees above zero. This record-low was part of an unprecedented 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 in the Sacramento Valley was estimated at 1.5 million dollars. Damage was particularly extensive in the Fair Oaks citrus orchards, where minimum temperatures dipped to as low as 11 degrees above zero. Oranges were frozen solid and many trees died. The celery and lettuce crops in the Delta area were also hard-hit. Ice thick enough for skating formed on the small lakes and ponds at Southside and McKinley Parks during this cold wave, with a layer of ice one-sixteenth of an inch thick reported on the Sacramento River. The cold spell broke December 16 when a warm and moist storm moved into the area from the mid-Pacific.

Snow in Sacramento is extremely rare. The "snowiest" month by far is January. The most snowfall recorded in downtown Sacramento in any 24-hour period was 3.5 inches, January 4-5, 1888. The heaviest snowfall in recent years occurred February 5, 1976, when 2 inches was recorded at the Sacramento 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. This happened April 19-20, 1880. Streets were described as "...having the appearance of miniature rivers." The rainstorm was colorfully reported in such terms as "...steady and business-like," "...a perfect torrent," and "...more like a catarrh than an April shower." The second-heaviest 24-hour rainfall total, 5.07 inches, occurred during the Columbus Day storm of October 12-13, 1962.

The maximum one-hour precipitation record is 1.65 inches, which fell during the evening of April 7, 1935. (Note: Hourly precipitation records are available only after 1903.) Thunderstorms were in the area and the heavy rain caused considerable street flooding.

The wettest month on record is January 1862, with 15.04 inches. This was before official Government observations began. Records at that time were kept by two physicians. The most rainfall for a season in Sacramento is 37.49 inches, set recently during the 1982-83 rainy season.

Sacramento's maximum wind speed of 70 mph occurred on two separate occasions - December 7, 1952 and November 13, 1953. Both wind storms were during the passage of Pacific weather fronts and were accompanied by rain. (Note: Both wind speed records were 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. See further explanations of wind velocities later in this book).

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

IV. A RECAP OF THE YEAR 1987

Hot weather made its appearance early in 1987, as a host of temperature records were tied or broken in April and May. Early October saw a number of temperature records established as well. Sandwiched in between these hot periods was a delightful spell of unusually cool weather occurring during the middle of July—normally the hottest period of the summer.

The 1986-87 rainy season got off to a horrendous start. With the exception of September, all other months of 1986 ended up with below normal precipitation. Here is a rundown of the July-December 1986 rainfall in Sacramento:

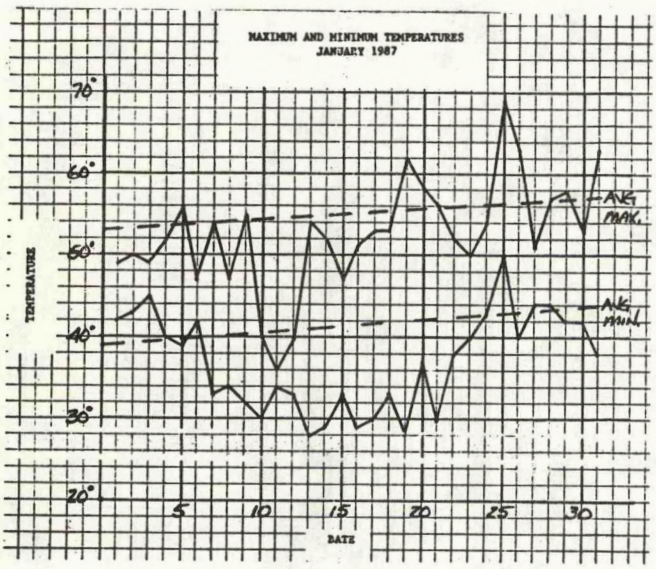
Month	Rainfall	Normal
Jul	0.00	0.05
Aug	0.00	0.09
Sep	0.80	0.30
Oct	0.33	0.90
Nov	0.22	2.31
Dec	1.30	3.00
Totals	2.65	6.65

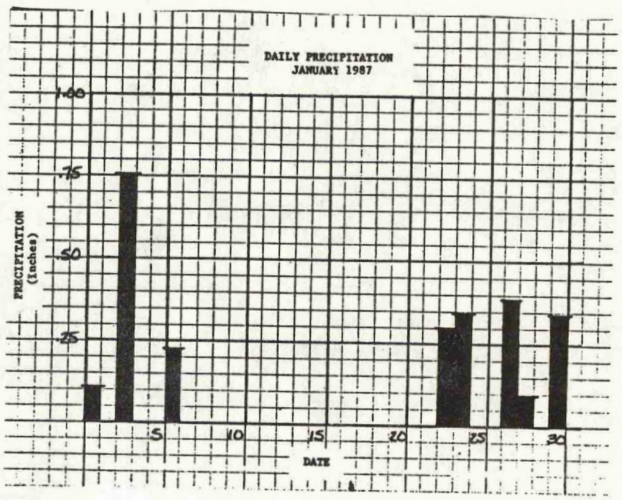
Except for February and March, 1987, rainfall for the remaining months was below normal. The July 1986-July 1987 rain total for downtown Sacramento was 12.81 inches, compared to a normal of 17.87 inches.

With the help of periodic surges of tropical moisture in October, the 1987-88 rainy season got off to a faster start than that of the previous season. Pacific storms were late in their arrival, however, with the first good Pacific storm in the area occurring about mid-November. From that point, Pacific storms made their way through Northern California with greater frequency, providing above normal rainfall in the valley and beneficial snow to the Sierra Nevada.

The following pages have summaries of weather conditions for each month. Significant weather events that took place at locations other than Sacramento are also noted. Included in the monthly summaries are graphs depicting the daily maximum and minimum temperatures with the daily normal temperature curve shown as dashed lines. Bar-graphs for each month show the daily precipitation.

JANUARY 1987

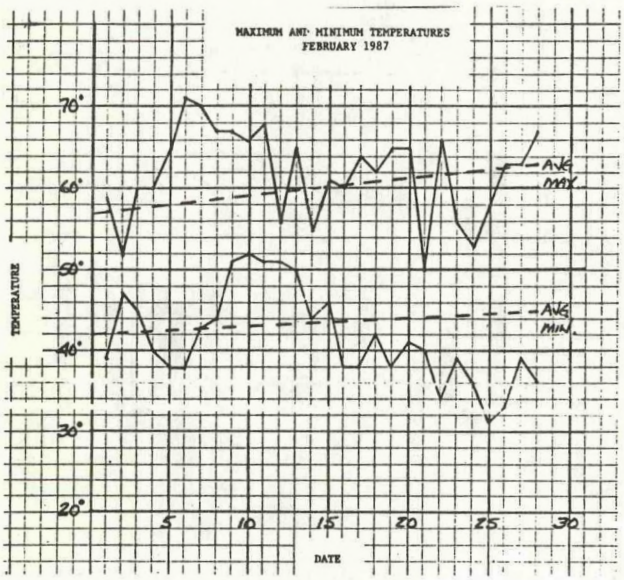


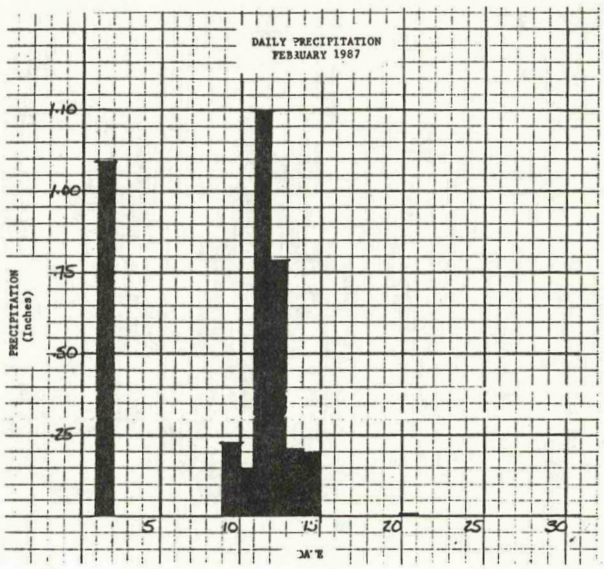


The dry-period that was experienced during the start of the 1986-87 rainy season continued into January 1987. Only 2.55 inches of rain was measured in downtown Sacramento. This was 1.63 inches below normal. The seasonal precipitation through the end of January was only 5.20 inches, compared to the July-January normal of 10.83 inches.

January 1987 was also a cold month, with an average monthly temperature of 44.8 degrees. This was 2.3 degrees below normal.

FEBRUARY 1987





February was the first month of the rainy season since September with above normal precipitation. The monthly total of 3.77 inches was almost an inch above the average.

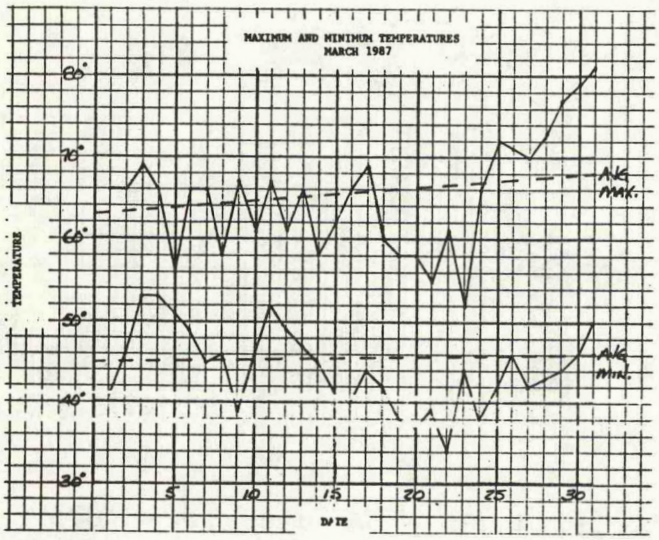
Nearly all of the monthly precipitation occurred during the beginning and mid-part of the month. Steady rain on the 2nd dropped 1.09 inches while a stormy period mid-month accounted for the rest. Downtown Sacramento registered 1.88 inches of rain during a 24-hour period on the 12th and 13th. Although only light amounts of rain were recorded in the downtown area on the night of the 10th, it was much heavier in parts of northeast Sacramento County, with a few locations reporting rainfall in excess of 1.50 inches.

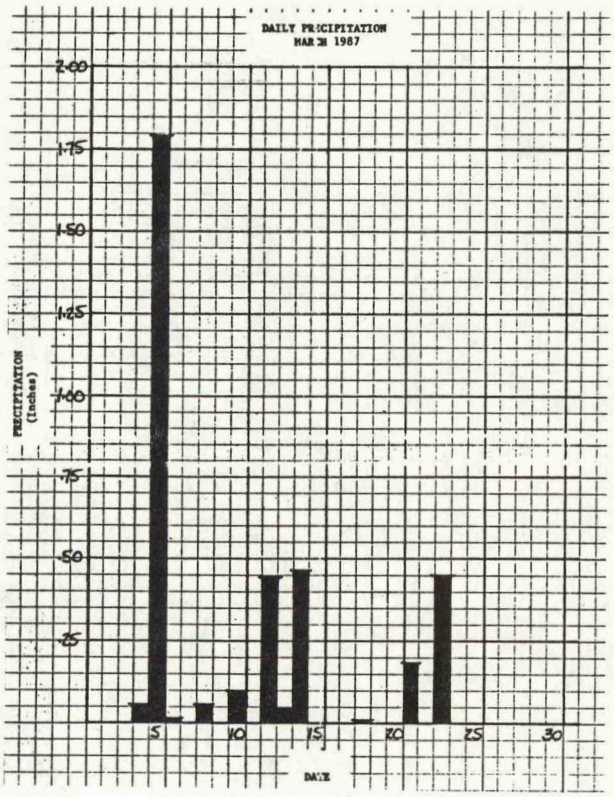
The accumulated precipitation from July 1986-February 1987 was 8.97 inches, or 4.80 inches below normal.

February had an average monthly temperature of 51.8 degrees, or 0.4 degree below normal. During the month, there were two daily temperature records set:

- 70 degrees on the 7th was a record-high for the date. Previous was 68 degrees in 1917.
- 67 degrees on the 9th was also a record-high for the date. Previous was 66 degrees in 1979.

MARCH 1987





Above normal precipitation fell for the second-consecutive month with at total of 3.57 inches. This was 1.39 inches above normal.

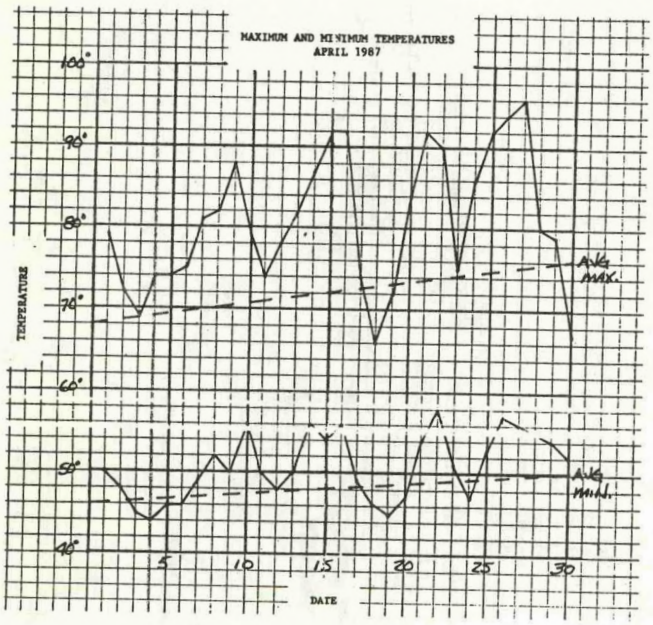
The wettest period was from the 4th through the 14th, with eight-of 11-days receiving measurable rain. A large Pacific storm on the 4th and 5th dumped 1.83 inches of rain, with far-lesser amounts during the rest of the period.

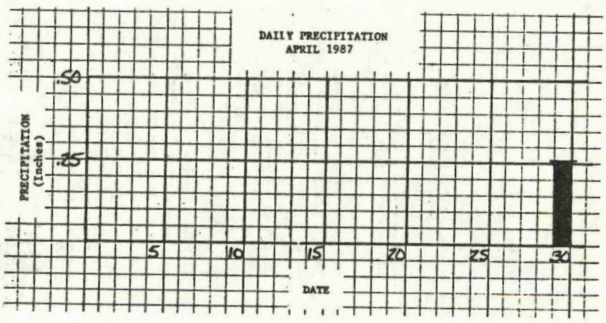
Localized severe weather in the Sacramento Valley ushered-out the wet period. A tornado caused considerable damage to a turkey farm in Corning, Tehama county, on the 14th. An unconfirmed tornado was reported near Marysville the same date. Hail pelted parts of the Mother Lode and northeast Sacramento County as the action moved southeast.

Cold and showery weather from the 18th through the 24th essentially ended the rainy season, as a long, dry period would be experienced throughout the remainder of the Spring and Summer.

The monthly average temperature was 54.8 degrees, or 0.5 degree below normal. The minimum temperature of 34 degrees on the 22nd was a record-low for the date. The previous record was 36 degrees in 1898.

Seasonal precipitation through March was 12.54 inches, or 3.41 inches below normal.





With an average monthly temperature of 65.8 degrees (5.5 degrees above normal), April 1987 went into the record book as the second-warmest April. Only April 1966, with 66.0 degrees, was warmer.

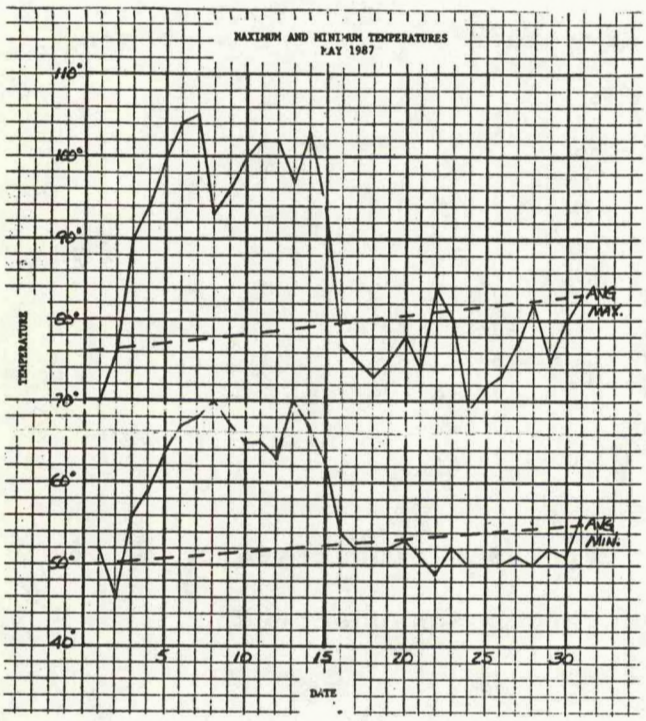
Only one day (the 30th) had measurable rain, when 0.26 inch was recorded. This was 1.18 inches below normal for the month. The seasonal rainfall was 12.80 inches, well below the July-April average of 17.39 inches.

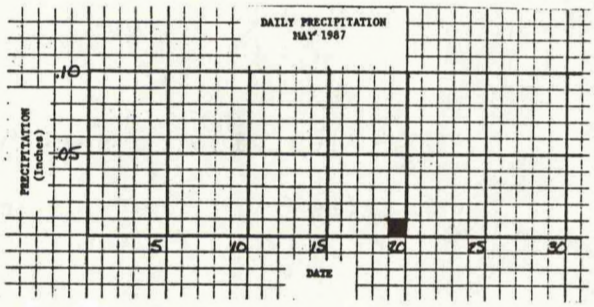
There were a number of daily maximum temperature records broken during the month. They were:

Date	Hi.Max	Previous	Year
9	88	86	1924
15	92	90	1966
16	92	90	1966
25	92	90	1973
26	94	91	1926
27	96	88	1965

The maximum temperature of 96 degrees on the 27th also tied the record-high for the month, sharing honors with April 29 and 30, 1981.

MAY 1987





May was a very hot month that saw numerous temperature records shattered. Temperatures well above normal occurred during the first-half of the month, cooling mercifully the latter-part.

With an average monthly temperature of 71.3 degrees (5.0 degrees above normal), May was the third-warmest on record.

Downtown Sacramento had only one day with measurable rain in May. This was on the 20th, when 0.01 inch was recorded. Once again, much heavier amounts were noted in the east part of Sacramento County as isolated thunderstorms drifted off the Sierra Nevada.

The seasonal rainfall for downtown Sacramento was 12.81 inches through May. Normal July-May precipitation is 17.74 inches.

A host of daily maximum temperature records were broken during the month. They were:

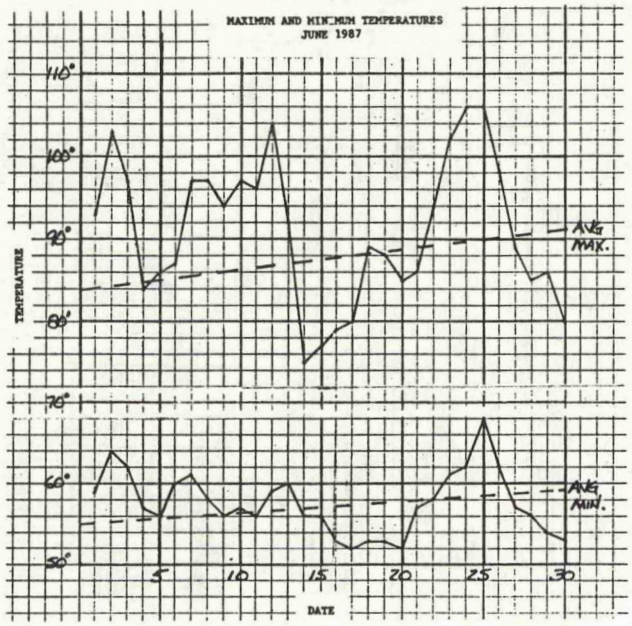
Date	Hi.Max	Previous	Year
4	94	89	1944
5	100*	92	1944
6	104	94	1969
7	105#	93	1974
9	96	94	1931
10	100	97	1934
11	102	98	1934
12	102	101	1976
14	103	99	1972

*Earliest in the season that 100 degrees was observed.

#Earliest in the season that 105 degrees was observed.

In addition, a number of daily high minimum temperature records were established. They are as follows:

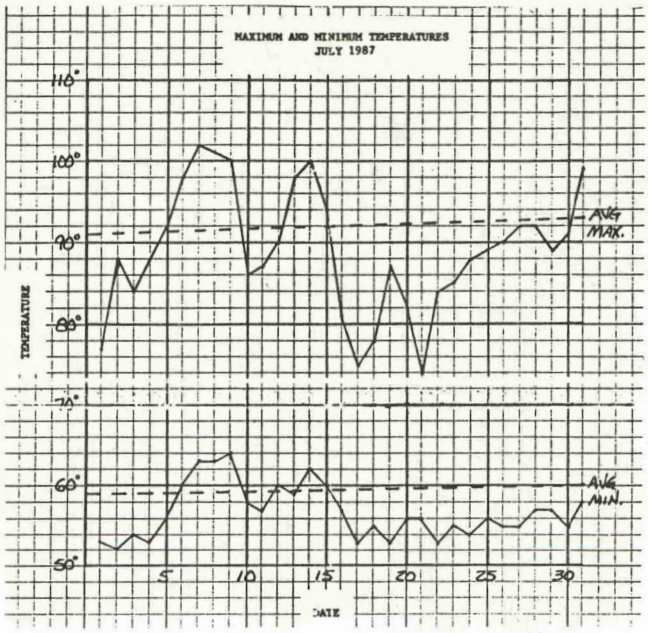
Date	Hi.Min	Previous	Year
6	67	60	1894
7	68	62	1967
8	70	65	1884
9	67	63	1894
13	70	69	1976
14	67	65	1972



Although no temperature records were set, June was another relatively hot month. The average monthly temperature was 74.4 degrees, or 2.2 degrees above normal.

Tropical moisture on the 6th brought a few sprinkles to the area, but not enough to be measured.

The 1986-87 rain year ended up at 12.81 inches, or 5.06 inches below normal.



This was the coolest July in Sacramento since 1944. The average monthly temperature was 72.9 degrees, or 3.7 degrees below normal.

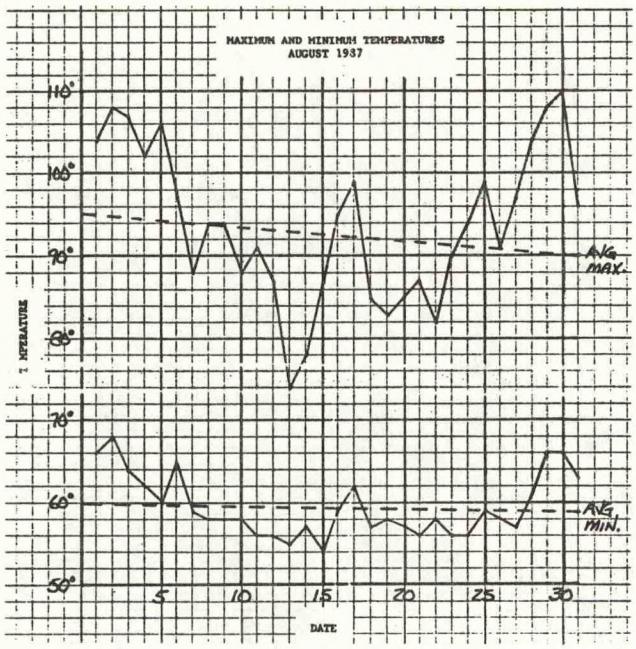
A strong, winter-like weather system from the Gulf of Alaska set the stage for the unusually cool temperatures. Much-below normal readings were observed from the 16th through the 30th. Remarkably, the extremely cool weather occurred during what is normally considered the hottest part of the Sacramento summer.

The Gulf of Alaska system brought a one-inch mixture of rain and snow to Alturas, Modoc county, during the middle of the month. Also, a dusting of snow fell over the high Sierra Nevada near Lake Tahoe.

There were a few temperature records broken or tied in July — this time on the cool-end of the scale. They were:

Date	Lo.Max	Previous	Year	
17	75	77	1878	
21	74	74	1979	Tied

AUGUST 1987



It was blistering hot the first-and last-weeks of the month with comfortably cool weather in the middle. August had an average monthly temperature of 76.7 degrees, or 1.1 degree above normal.

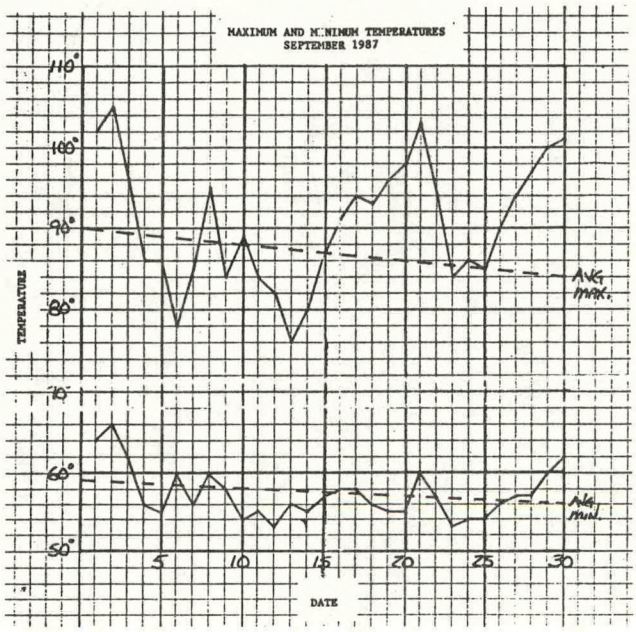
Record-high temperatures were tied or broken on the following dates:

Date	Hi.Max	Previous	Year	
2	108	107	1946	
3	107	107	1969	Tied
29	108	104	1976	
30	110	106	1976	

Moisture from ex-Hurricane "Jova" spread considerable cloudiness over the area from the 18th through the 20th. Sprinkles fell on the 20th, but were not enough to be measured.

The end of August saw the combination of an upper-level low offshore San Diego and a strong high over Nevada create a southeasterly flow of moist and unstable air. This touched-off numerous "dry" thunderstorms along the foothills and high country of the Sierra Nevada. Lightning from the "dry" thunderstorms caused widespread forest fires over much of California and Oregon.

SEPTEMBER 1987



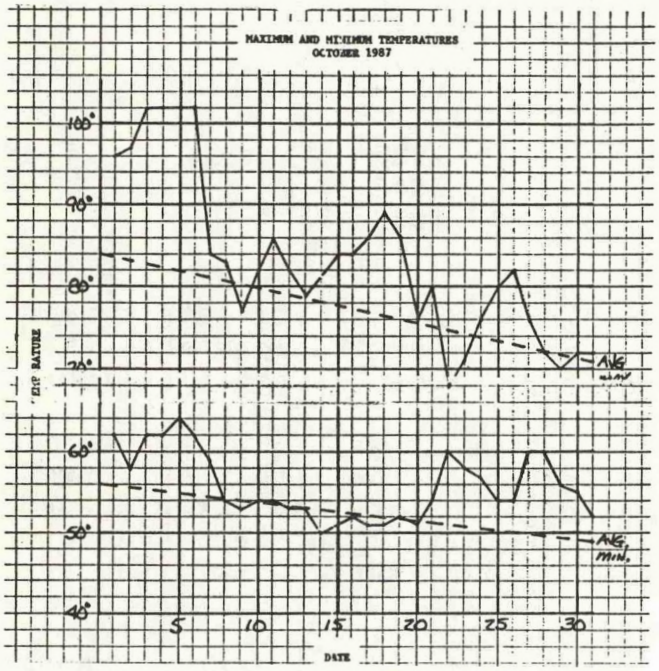
Hot, muggy days with air thick with smoke from raging forest fires occurred the first few days of September. Cooler weather began the 3rd, but hazy and smoky conditions continued through about mid-month.

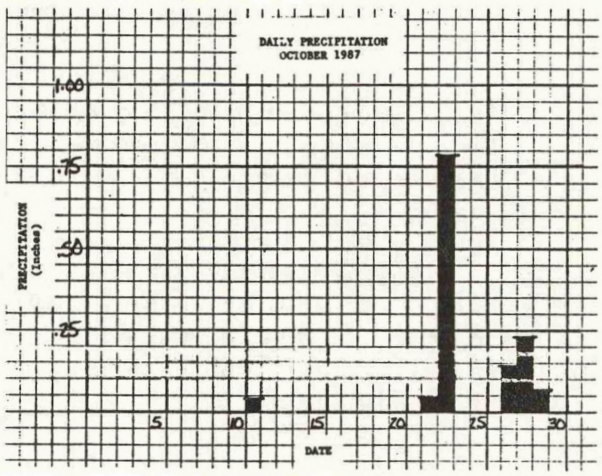
September was a bit above mormal (1.1 degree) with an average monthly temperature of 74.0 degrees. There was no measurable rain during the month.

Record-high temperatures were broken on the following dates:

Date	Hi.Max	Previous	Year
21	103	102	1928
30	101	97	1980

OCTOBER 1987





October 1987 tied for the second-warmest on record with an average monthly temperature of 69.5 degrees. This was 4.2 degrees above normal. The warmest October was in 1976 with 70.1 degrees, followed by 1983 and 1987.

Rain in Downtown Sacramento on the 11th marked the first-day with measurable rain since May 20 — 144-consecutive days. This was the eighth-longest dry-spell on record.

Precipitation for the month was 1.30 inches, or 0.40 inch above normal.

Quite a few record-high maximum temperatures were broken or tied during the month. They were:

Date	Hi.Max	Previous	Year	
3	102	102	1980	Tied
4	102	102	1980	Tied
5	102	99	1933	
6	102	96	1980	

The maximum temperatures of 102 degrees from the 3rd through 6th also tied the record-high for the month, set on several dates in 1980.

Record-high minimum temperatures for the date during the month of October were as follows:

Date	Hi.Min	Previous	Year	
6	62	62	1985	Tied
27	60	58	1944	
28	60	58	1926	

October 1987 will be remembered not only for its late-summer heat wave, but also for the locally heavy thunderstorms that occurred periodically during the month. Some of the highlights were:

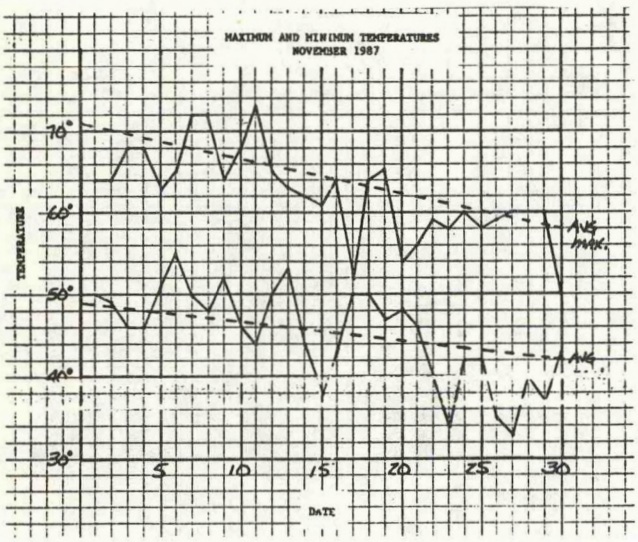
The thunderstorms on the afternoon of the 11th that formed west of Stockton and developed rapidly during the evening and night. While only light amounts of rain fell in the Sacramento area, the rain was much heavier along the Sierra Nevada foothills.

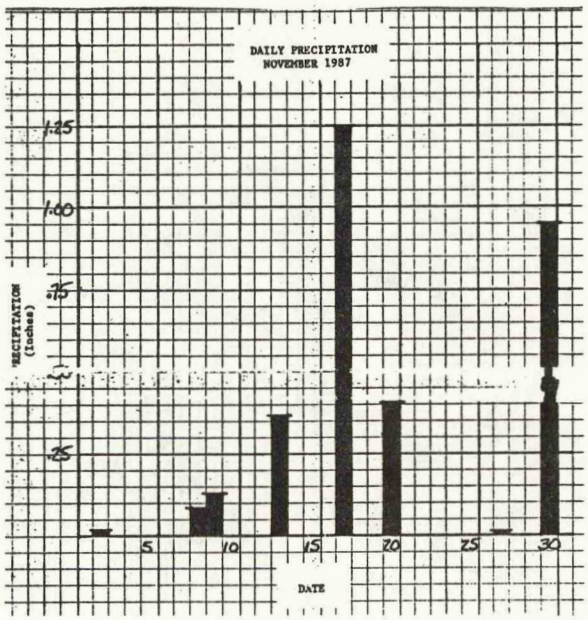
An upper low offshore California on the 22nd, feeding bands of moisture over the state, brought heavy rain to southern California. The action spread north on the 23rd. A tremendous downpour in downtown Sacramento early that morning dropped 0.69 inch of rain in one hour shortly before 6 AM. Much of that (0.60 inch) fell in a 45-minute period.

The upper low persisted through the end of the month and continued to spread bands of showers to the state. On the 28th, widespread showers and thunderstorms caused street-flooding in Colusa County, especially in the communities of Williams and Arbuckle. Thunderstorms over the Sierra Nevada foothills that night brought heavy rain and hail to the Placerville area.

Early morning of the 29th again saw locally heavy thunderstorms in the Sacramento area. While only light amounts of rain fell in the downtown area that morning, some of the suburban areas had extremely heavy rain. McClellan Air Force Base, for example, reported 1.72 inches of rain in a half-hour, with a 24-hour total of 2.30 inches.

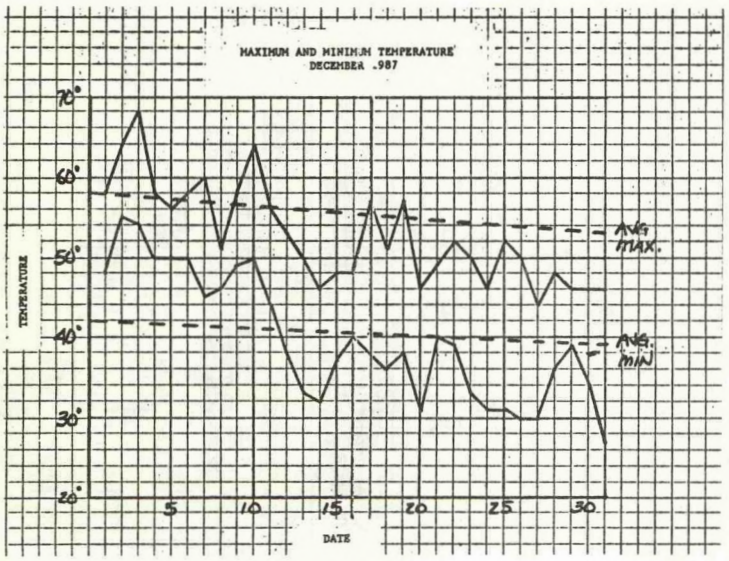
NOVEMBER 1987

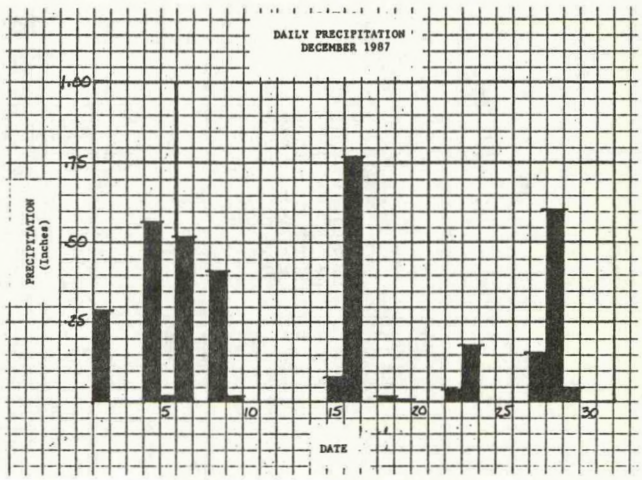




November marked the second-consecutive month with above normal precipitation. The monthly total was 3.22 inches, or 0.91 inch above normal. The first significant Pacific storm of the season occurred on the 17th, with 1.25 inches of rain in downtown Sacramento.

DECEMBER 1987





After a relatively wet and mild first-week, December turned wet and cold. It was also the third-consecutive month with above normal rainfall. There were 15 days with measurable rain, totaling 3.75 inches. This was 0.75 inches above normal.

The seasonal precipitation from July 1 through December 31, 1987, was 8.27 inches, compared to 2.65 inches for the same period last year. Normal July through December precipitation is 6.65 inches.

The average monthly temperature was 46.3 degrees, or 1.2 degrees below normal. Highlight of the month was the 27 degree minimum temperature the morning of the 31st. Although this was not a record temperature, it was the coldest morning since December 13, 1972, when the overnight low dipped to 25 degrees.

V. TEMPERATURE RECORDS

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - JANUARY 1987

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	1948*	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	1962	37	1968	57	1953	22	1937
9	69	1953	37	1926*	58	1953	22	1937
10	66	1962	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	67	1920	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	69	1976	41	1961	53	1953	27	1922*
20	69	1976	36	1937	55	1969	22	1883
21	70	1976	37	1962	57	1970	22	1937
22	66	1976*	40	1893	59	1970	24	1937
23	69	1948	40	1893	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	1984	40	1963	51	1925	27	1957
28	70	1984	43	1977*	52	1907	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*
Mon:	74	1976	33	1961	59	1980*	19	1888

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - FEBRUARY 1987

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	70	1963	40	1883	56	1963*	22	1883
4	72	1984	42	1899	55	1885	23	1883
5	69	1984	42	1887	55	1940*	28	1883
6	73	1963	43	1949	55	1963	30	1899
7	70	1987	44	1929*	54	1960*	27	1883
8	68	1917	43	1901	55	1975	27	1883
9	67	1987	45	1939	53	1941*	28	1891*
10	70	1983	44	1939	55	1941	29	1933*
11	70	1981*	44	1894*	54	1970	30	1884
12	73	1886	45	1884	56	1879	25	1884
13	74	1971	46	1884	54	1986*	21	1884
14	76	1930	44	1911	56	1986*	27	1884
15	76	1977	42	1884	57	1982	31	1883
16	76	1977	49	1905*	55	1982*	30	1883
17	76	1977	45	1917*	54	1986*	30	1880
18	80	1899	46	1890*	56	1980	31	1956*
19	77	1964*	44	1897	54	1968	31	1882
20	73	1982*	46	1909*	56	1968	31	1953*
21	75	1985	42	1913	56	1968	31	1955
22	78	1985	48	1951*	56	1904	33	1920
23	78	1985	48	1890	58	1968	32	1890
24	76	1985	48	1930*	55	1957	35	1960*
25	77	1986	49	1887	55	1957*	30	1887
26	75	1888	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*	50	1924	36	1888
Mon:	80	1985*	40	1883	58	1968*	21	1884

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - MARCH 1987

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	76	1968*	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*	56	1983	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	77	1951*	50	1919	56	1900	33	1954
14	81	1934*	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	1972	49	1886	60	1914	35	1955
18	82	1914	52	1954*	55	1914	34	1945*
19	80	1984*	50	1937	60	1914	35	1898
20	84	1960	50	1946*	56	1984	33	1952
21	82	1960	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	1924	60	1896	34	1945*
25	81	1952	48	1907	60	1896	34	1936
26	81	1923*	50	1985	55	1974*	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	1892	57	1885	37	1936
Mon:	90	1966	45	1976	60	1914*	29	1880

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - APRIL 1987

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	88	1924	55	1929*	57	1939	34	1929
7	89	1934	54	1893	60	1878	36	1929
8	87	1985	54	1965	63	1878	34	1953
9	88	1987	52	1965	60	1904*	34	1929
10	92	1951	52	1912	60	1885	34	1927
11	87	1908	51	1956	62	1904	37	1953
12	89	1962*	50	1922	58	1932*	36	1912
13	92	1985	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*	57	1977*	36	1933
18	91	1939	54	1967	62	1907	38	1933
19	91	1939	53	1880	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	1981	56	1948*	60	1908	40	1970*
29	96	1981	53	1948	63	1981	39	1948
30	96	1981	54	1938	62	1981	39	1933
Mon:	96	1987*	49	1963	64	1907	34	1953*

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - MAY 1987

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	94	1966	56	1950	61	1947	40	1964
3	94	1970	55	1892	61	1970	37	1950
4	94	1987	56	1892	61	1982	42	1952*
5	100	1987	57	1964	67	1878	43	1961*
6	104	1987	59	1933	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	59	1948	63	1886*	42	1917
19	98	1947	60	1948	66	1920	41	1896
20	102	1947	56	1957*	67	1931	44	1901
21	99	1967	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
Mon:	107	1984	54	1905	72	1890*	37	1950*

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - JUNE 1987

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	1928	46	1939
5	108	1926	60	1967	71	1883	47	1887
6	105	1978	57	1914	73	1974	47	1887
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	1945	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	105	1957	59	1912	78	1909	50	1930
24	110	1925	64	1899	74	1976	49	1918
25	111	1925	68	1906	74	1976*	48	1901
26	106	1973*	61	1906	73	1973*	48	1930
27	108	1976	65	1889	73	1973	49	1906
28	108	1976	66	1952	74	1891	47	1916
29	107	1950	74	1952	75	1891	50	1949
30	112	1934	71	1982	74	1891	49	1881
Mon:	112	1934	57	1964*	78	1909	43	1929

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - JULY 1987

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	1984	68	1938	72	1984*	50	1919
3	107	1970*	65	1910	74	1970	47	1901
4	109	1931	68	1948*	75	1931	50	1919
5	107	1931	71	1915	72	1931	50	1919
6	104	1921	76	1935	71	1957	50	1899
7	107	1905	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	1961*	72	1892*	72	1896	50	1932*
11	110	1961	75	1914*	76	1913	50	1898
12	107	1927	71	1956	72	1897	49	1899
13	112	1972	71	1920	74	1972	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	74	1935*	48	1887
18	107	1961	69	1932	72	1925	50	1921
19	109	1936	72	1907	71	1961	49	1887
20	107	1933	74	1985*	75	1917	50	1887
21	106	1960	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	1943	75	1985	69	1967	51	1887
30	109	1977	68	1966	70	1980*	50	1919
31	103	1979*	74	1933*	74	1980	51	1919
Mon:	114	1925	65	1910	77	1974*	47	1901

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - AUGUST 1987

MONTH: August

Date	High Max.	Year	Low Max.	Year	High Min.	Year	Low Min	Year
1	106	1980	76	1933	74	1977*	50	1887
2	108	1987	69	1953	70	1879	50	1887
3	107	1987*	73	1953*	71	1885	51	1919
4	106	1966	70	1950	68	1885	50	1897
5	107	1978	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	108	1984*	74	1916	71	1984*	50	1919
9	108	1984*	72	1949	70	1978	50	1931
10	108	1971	75	1916	70	1971*	50	1919
11	110	1898	72	1965	72	1935*	49	1910
12	106	1898	74	1968	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	105	1920	75	1918	73	1983	50	1955
17	106	1967*	71	1899	74	1966	51	1917
18	107	1950	68	1975	70	1883	52	1894
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	1881	73	1913	50	1887
25	104	1931	68	1920	69	1931	52	1887
26	106	1894	73	1975	74	1935	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	68	1977*	48	1887
31	108	1976	66	1964	68	1972	51	1914*
Mon:	111	1933	66	1964	76	1983*	48	1921*

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - SEPTEMBER 1987

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	107	1955	67	1900	72	1950	47	1914
5	104	1975	70	1912	68	1923	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*	49	1931
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	67	1959	77	1984	44	1882
19	101	1936	62	1896	72	1939	46	1947*
20	101	1936	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	1952	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	101	1987	58	1930*	65	1976	46	1894
Mon:	109	1955*	58	1930*	77	1984	44	1934*

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - OCTOBER 1987

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	93	1958	57	1924	64	1887	44	1941
11	93	1917	57	1925	62	1954	40	1886
12	94	1976	55	1899	61	1959	42	1924
13	93	1950	50	1899	62	1979	40	1879
14	94	1978	56	1878	63	1979	36	1881
15	94	1961	57	1938	64	1979	38	1881
16	95	1961	49	1984	61	1933	41	1984*
17	92	1974	60	1892	61	1974	38	1984*
18	91	1974	59	1984	59	1979*	39	1905
19	90	1928	55	1908	58	1979*	43	1949*
20	89	1927	58	1961*	62	1940	37	1949*
21	90	1929	60	1931*	60	1982*	38	1886
22	89	1964*	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	1983*	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	1965*	50	1886	61	1983	34	1935
31	86	1966	56	1886	61	1983	38	1971*
Mon:	102	1987*	49	1984	70	1899	34	1946*

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - NOVEMBER 1987

MONTH: November

Date	High Max.	Year	Low Max.	Year	High Min.	Year	Low Min.	Year
1	86	1966	50	1935	59	1983	34	1886
2	86	1966	53	1935	57	1913	36	1936
3	85	1976	52	1935	58	1966*	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	1955	47	1920	59	1976	35	1946
11	77	1986	46	1985	56	1976*	31	1911
12	78	1900	49	1985*	56	1966	30	1938
13	77	1933	46	1955	56	1903*	30	1985*
14	76	1906	48	1982	56	1976	30	1916
15	80	1923	48	1982*	58	1966	29	1880
16	76	1932	46	1982*	54	1966	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	1909	30	1880
23	80	1930	45	1985	58	1926	28	1931
24	73	1959	44	1985	56	1909	30	1931
25	75	1932	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	68	1977*	46	1919	55	1926	30	1880
Mon:	86	1966	44	1985*	62	1950	27	1880

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1877 - DECEMBER 1987

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	51	1950	29	1909
5	72	1979	44	1963	54	1975	32	1972
6	68	1979*	43	1948*	52	1881*	29	1891
7	68	1979*	42	1965	53	1950*	28	1891
8	71	1943	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	68	1929	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	53	1884	25	1924
20	65	1976	36	1908	57	1969	27	1928
21	63	1969	36	1965	57	1964	26	1928
22	65	1914	35	1928	58	1964	25	1928
23	66	1964	32	1928	58	1964	28	1930*
24	66	1964*	38	1899	56	1884	25	1879
25	64	1967	38	1899	55	1964	26	1891
26	65	1967	37	1899	55	1892*	25	1879
27	68	1953	38	1985*	52	1945*	27	1878
28	72	1967	37	1899	54	1973	26	1930
29	66	1975	38	1908	52	1945	24	1878
30	60	1970*	38	1929*	53	1886	28	1962*
31	61	1979*	37	1882	54	1979	24	1915
Mon:	72	1979*	32	1972*	58	1964*	17	1932

*Also occurred on earlier dates or years.

Temperature:

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

July 1877-December 1987

Month	#Normal Daily Maximum	Highest Daily Max.			Lowest Daily Max.		
		Temp	Date	Year	Temp	Date	Year
Jan	53.9	74	31	1976	33	5	1961
Feb	60.6	80	27	1985*	40	3	1883
Mar	65.4	90	31	1966	45	2	1976
Apr	71.9	96	27	1987*	49	20	1963
May	79.7	107	28	1984	54	7	1905
Jun	87.1	112	30	1934	57	8	1964*
Jul	93.1	114	17	1925	65	3	1910
Aug	91.5	111	13	1933	66	31	1964
Sep	87.6	109	2	1955*	58	30	1930*
Oct	78.0	102	6	1987*	49	16	1984
Nov	64.1	86	2	1966	44	24	1985*
Dec	54.6	72	5	1979*	32	14	1972*
Annual	74.0	114	July 17	1925	32	Dec. 14	1972*

Climatological Standard Normals 1951-1980
* Also occurred on earlier years.

Temperature:

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

July 1877-December 1987

Month	#Normal Daily Minimum	Lowest Daily Min.			Highest Daily Min.		
		Temp	Date	Year	Temp	Date	Year
Jan	40.2	19	15	1888	59	13	1980*
Feb	43.7	21	13	1884	58	23	1968*
Mar	45.2	29	15	1880	60	19	1914*
Apr	48.2	34	08	1953*	64	19	1907
May	52.8	37	03	1950*	72	24	1890*
Jun	57.3	43	01	1929	78	23	1909
Jul	60.0	47	03	1901	77	25	1974*
Aug	59.6	48	13	1921*	76	07	1983*
Sep	58.1	44	25	1934*	77	18	1984
Oct	52.6	34	28	1946*	70	09	1899
Nov	45.3	27	28	1880	62	20	1950
Dec	40.4	17	11	1932	58	23	1964*
Annual	50.3	17	Dec. 11	1932	78	June 23	1909

Climatological Standard Normals 1951-1980
* Also occurred on earlier years.

Temperature:

HIGHEST AND LOWEST AVERAGE MAXIMUM TEMPERATURE BY MONTHS WITH YEAR OF OCCURRENCE. (July 1877-December 1987)

Month	#Normal Monthly Maximum	Highest Average Maximum	Year	Lowest Average Maximum	Year
January	53.9	62.1	1976	45.9	1937
February	60.6	66.8	1985	52.5	1887
March	65.4	73.2	1934	56.7	1897
April	71.9	80.8	1987	60.2	1967
May	79.7	88.6	1984	68.6	1915
June	87.1	94.6	1985	76.3	1884
July	93.1	98.0	1984	84.4	1903
August	91.5	97.8	1967	81.9	1899
September	87.6	94.0	1984	78.1	1911
October	78.0	83.9	1917	68.6	1882
November	64.1	70.7	1929	57.8	1882
December	54.6	68.0	1958	47.0	1924
Annual	74.0	98.0	July 1984	45.9	Jan. 1937

HIGHEST AND LOWEST AVERAGE MINIMUM TEMPERATURE BY MONTHS WITH YEAR OF OCCURRENCE. (July 1877-December 1987)

Month	#Normal Monthly Minimum	Highest Average Minimum	Year	Lowest Average Minimum	Year
January	40.2	46.3	1986*	30.4	1949
February	43.7	49.1	1963	36.4	1880
March	45.2	50.9	1978	38.9	1880
April	48.2	53.9	1926	42.3	1929
May	52.8	57.4	1984	47.2	1899
June	57.3	63.8	1981	52.1	1910
July	60.0	63.4	1984	54.3	1887
August	59.6	63.6	1983	53.5	1911
September	58.1	62.0	1979	52.0	1910
October	52.6	56.6	1976	46.2	1916
November	45.3	50.4	1976*	38.0	1880
December	40.4	46.6	1950	33.4	1932
Annual	50.3	63.8	June 1981	30.4	Jan. 1949

Climatological Normals from the years 1951-1980.
* Also occurred earlier years.

Temperature:

HIGHEST AND LOWEST MONTHLY AVERAGE TEMPERATURES
(July 1877-December 1987)

Month	Highest Monthly Average Temperature		Lowest Monthly Average Temperature	
	Temp	Year	Temp	Year
JANUARY	52.6	1986	38.7	1937
	51.8	1953	40.6	1922
Normal	51.7	1970	41.2	1929
47.1	51.5	1976	41.8	1883
	50.6	1909	42.0	1898,1926
	50.5	1978	42.1	1893
FEBRUARY	57.6	1963	44.9	1887
	55.9	1968,1986	45.5	1903
Normal	55.6	1981	45.7	1880
52.2	55.4	1980	46.6	1949
	55.3	1983	46.9	1911
	55.0	1976	47.1	1922
MARCH	61.5	1934	49.2	1880
	60.9	1986	49.4	1897
Normal	60.6	1972,1984	50.4	1935
55.3	60.4	1885	50.8	1917,22,45,48
	60.3	1926	50.9	1907
	59.1	1978	51.0	1920
APRIL	66.0	1966	52.2	1967
	65.8	1987	53.3	1896
Normal	64.4	1934	54.0	1929
60.1	64.3	1939,59,77,85	54.3	1912
	63.6	1981	54.7	1948
	63.5	1931	55.0	1880

Monthly Normals based on Climatological Normals 1951-1980.

HIGHEST AND LOWEST MONTHLY AVERAGE TEMPERATURES
(July 1877-December 1987)

Month	Highest Monthly Average Temperature		Lowest Monthly Average Temperature	
	Temp	Year	Temp	Year
MAY	73.0	1984	58.2	1934
	71.6	1976	59.3	1899
Normal	71.3	1987	59.6	1933
66.3	70.2	1973	58.8	1911,16,17
	69.7	1970,1975	60.0	1896
	69.6	1931	60.2	1930
JUNE	79.2	1981	64.8	1894
	77.5	1985	65.9	1923
Normal	76.4	1974	66.2	1952
72.2	76.0	1918	66.4	1907,1910
	75.8	1957,1973	66.5	1906
	75.5	1960	66.7	1905
JULY	80.7	1984	69.4	1903
	79.5	1931	70.2	1887
Normal	78.9	1985	70.7	1907
76.6	78.7	1967	71.0	1914
	78.6	1918,1976	71.2	1904
	78.3	1936	71.4	1895
AUGUST	79.9	1967	68.0	1899
	79.6	1969	68.8	1911
Normal	79.0	1958,1966	69.8	1887
75.6	78.2	1983	70.2	1900
	77.6	1974	70.4	1881
	77.5	1972	70.6	1954

Monthly Normals based on Climatological Normals 1951-1980.

HIGHEST AND LOWEST MONTHLY AVERAGE TEMPERATURES
(July 1877-December 1987)

Month	Highest Monthly Average Temperature		Lowest Monthly Average Temperature	
	Temp	Year	Temp	Year
SEPTEMBER	77.3	1979	65.4	1893
	77.2	1984	65.5	1911
Normal	76.5	1974	65.6	1930
72.9	75.6	1922,1975	66.0	1907
	75.5	1888	66.4	1925
	75.4	1983	66.6	1884
OCTOBER	70.1	1976	57.6	1881
	69.5	1983,1987	58.2	1916
Normal	68.5	1958,1965	58.6	1920
65.3	68.4	1933,1974	58.8	1882,1886
	68.0	1917,1978	59.0	1883
	67.8	1980	59.5	1924
NOVEMBER	59.2	1976	49.3	1880
	59.0	1932	49.6	1882
Normal	58.6	1926	49.8	1922
54.7	58.5	1923	50.2	1881
	58.3	1981	50.4	1985
	58.2	1894	50.5	1916
DECEMBER	52.6	1958	41.5	1932
	51.3	1976	42.1	1908
Normal	51.1	1969	42.2	1924
47.5	51.0	1964	42.5	1963
	50.9	1979	42.6	1985
	50.8	1983	43.2	1890,1948

Monthly Normals based on Climatological Normals 1951-1980

Temperature:

HIGHEST AND LOWEST ANNUAL TEMPERATURE
(1878-1987)

Highest Annual Average			Lowest Annual Average	
Temp.	Year		Temp.	Year
65.1	1976		58.1	1880
64.7	1981	Average Annual Temperature 62.2	58.4	1911
63.8	1967,1984		58.8	1893
63.7	1986		59.2	1902
63.6	1974,1983		59.3	1912
63.3	1979		59.3	1919

Average Annual Temperature based on Climatic Standard Normals 1951-1980.

Temperature:

RECORD NUMBER OF DAYS PER YEAR WITH MAXIMUM TEMPERATURES
90, 100 and 105 DEGREES OR HIGHER
(1878-1987)

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

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

90 Degrees or higher	79 days
100 Degrees or higher	17 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.

Temperature:

GREATEST NUMBER OF CONSECUTIVE DAYS WITH
MAXIMUM TEMPERATURES
90 DEGREES OF HIGHER
(July 1877-September 1987)

Days	Period	Year	Days	Period	Year
35	Jul 24-Aug 27	1967	18	Jun 23-Jul 10	1985
29	Jun 22-Jul 20	1984	18	Jul 19-Aug 5	1945
25	Jul 17-Aug 10	1974	18	Jun 19-Jul 6	1929
24	Jul 25-Aug 17	1969	17	Jul 29-Aug 14	1986
23	Jul 26-Aug 17	1983	17	Jul 26-Aug 11	1978
22	Jun 15-Jul 6	1981	17	Jul 1-Jul 17	1953
22	Jul 7-Jul 28	1961	17	Jul 9-Jul 25	1917
21	Jul 29-Aug 18	1971	16	Jul 19-Aug 3	1980
21	Jul 29-Aug 18	1920	16	Jul 28-Aug 12	1955
20	Jul 15-Aug 3	1959	16	Jul 12-Jul 27	1891
20	Sep 8-Sep 27	1899	16	Jun 29-Jul 14	1882
19	Aug 27-Sep 14	1948			

Only periods with 16 or more days tabulated.
Records are for the months of June, July, August and September.

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

Days	Period	Days	Period
30	Aug 1967	26	Jul 1984
28	Jul 1969	26	Jul 1981
28	Jul 1967	26	Aug 1966
28	Jul 1953	26	Jul 1959
28	Aug 1969	25	Jul 1985
27	Jul 1970	25	Aug 1984
27	Aug 1985	25	Aug 1974
27	Aug 1958	25	Jul 1917
27	Aug 1931		

Only months with 25 or more days tabulated.

Temperature:

GREATEST NUMBER OF CONSECUTIVE DAYS WITH
MAXIMUM TEMPERATURES
100 DEGREES OR HIGHER
(July 1877-September 1987)

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

Only periods with 6 or more days tabulated.
Records are for the months of June, July, August and September.

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

Days	Period	Days	Period
16	Jul 1984	12	Aug 1966
16	Jul 1931	11	Jul 1980
14	Aug 1969	11	Jul 1979
13	Jul 1985	11	Jul 1933
12	Jun 1981	10	Jul 1936
12	Aug 1967	10	Jun 1985

Only months with 10 more days tabulated.

Temperature:

GREATEST NUMBER OF CONSECUTIVE DAYS WITH
MAXIMUM TEMPERATURES
105 DEGREES OR HIGHER
(July 1877-September 1987)

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

Only periods with 3 or more days tabulated.
Records are for the months of June, July, August and September.

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

Days	Period	Days	Period
7	Jul 1984	5	Aug 1923
7	Jul 1931	5	Aug 1920
6	Jun 1985	4	Aug 1978
6	Jun 1961	4	Jul 1972
6	Jul 1985	4	Jul 1960
5	Aug 1987	4	Sep 1950
5	Aug 1966	4	Jul 1935
5	Jul 1961	4	Aug 1913
5	Jul 1933	4	Aug 1898

Only months with 4 or more days tabulated.

Temperature:

AVERAGE NUMBER OF DAYS PER MONTH WITH MAXIMUM TEMPERATURES
90, 100 AND 105 DEGREES OR HIGHER
(April 1958-October 1987)

Month	90 or above	100 or above	105 or above
April	1	0	0
May	7	1	*
June	13	4	1
July	22	6	2
August	21	5	1
September	13	2	*
October	3	*	0
Annual Average	79 Days	17 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 two occurrences happening 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 31, 1966
Latest " " " " .....October 24, 1959 and 1965

Earliest date 100 or higher....May 5, 1987
Latest " " " " ....October 7, 1980

Earliest Date 105 or Higher....May 7, 1987
Latest " " " " ....September 16, 1984

Temperature:

GREATEST NUMBER OF CONSECUTIVE DAYS WITH
MINIMUM TEMPERATURES
32 DEGREES OR LOWER
(December 1877-December 1987)

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

Only periods with 6 or more days tabulated.
Records are for the months of December, January and February.

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

Days	Period	Days	Period
24	Jan 1949	13	Jan 1888
17	Jan 1947	13	Jan 1883
16	Jan 1963	12	Nov 1880
16	Jan 1898	12	Dec 1956
14	Dec 1930	12	Dec 1898
14	Dec 1878	11	Jan 1929
14	Jan 1937	11	Dec 1949
13	Feb 1883	11	Dec 1918
13	Jan 1922		

Only months with 11 or more days tabulated.
Records are for the months November through February.

Temperature:

FREEZE DATA
DOWNTOWN SACRAMENTO
(January 1881-Spring 1987)

FREEZE (32° OR BELOW)

Latest Date in Spring	Earliest Date in Fall	Average Date in Spring	Average Date in Fall
March 27 1898	November 4 1935	January 27	December 10

*FREEZE-FREE PERIODS

Longest		Shortest		Average Length
Days	Year	Days	Year	316 Days
366	1976	241	1898	
365	1983			
365	1981			
365	1934			
365	1904			
365	1885			

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

Least Number of Days		Greatest Number of Days	
Days	Year	Days	Year
0	1885,1904,1934	39	1949
0	1976,1981,1983	27	1883,1898
1	1881,1892,1900	22	1947
1	1907,1966,1974	19	1985
1	1977,1980	18	1880,1963
2	1909,1915,1925	17	1962
2	1973,1979,1982	16	1922,1987
	1984,1986	15	1878,1929
		15	1950,1956

*Freeze-Free Period is the number of days between the last freeze (32 Degrees or below) in the Spring and the first freeze (32 Degrees or below) in the Fall.

VI. PRECIPITATION RECORDS

Precipitation:

MAXIMUM AND MINIMUM PRECIPITATION BY MONTHS
WITH YEAR OF OCCURRENCE
(July 1849-December 1987)

	Maximum Monthly Precipitation		Minimum Monthly Precipitation	
Month	Amount	Year	Amount	Year
Jan.	15.04	1862	0.15	1889
	12.72	1911	0.29	1920
Normal	9.76	1896	0.37	1976
4.18	9.65	1909	0.45	1904
	9.61	1978	0.51	1948
Feb.	10.30	1986	0.04	1899
	9.25	1940	0.09	1896
Normal	9.13	1958	0.12	1852
2.94	8.59	1836	0.16	1913
	8.50	1854	0.19	1964
Mar.	10.00	1850	0.03	1956
	8.45	1906	0.04	1898
Normal	8.30	1983	0.05	1926
2.18	8.14	1864	0.08	1885
	7.28	1907	0.13	1934
Apr.	14.20	1880	T#	1949*
	5.81	1935	0.03	1933
Normal	5.34	1896	0.05	1931
1.44	4.76	1941	0.06	1946*
	4.58	1942	0.08	1945*
May	3.25	1889	0.00	1982
	3.04	1948	and 12 other	
Normal	2.88	1900	years prior.	
0.35	2.85	1883		
	2.75	1915		
Jun.	1.45	1884	0.00	1987
	1.10	1875	and many years	
Normal	1.02	1929	prior	
0.13	0.85	1907		
	0.68	1967		

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

Precipitation:

MAXIMUM AND MINIMUM PRECIPITATION BY MONTHS
WITH YEAR OF OCCURRENCE
(July 1849-December 1987)

	Maximum Monthly Precipitation		Minimum Monthly Precipitation	
Month	Amount	Year	Amount	Year
Jul.	0.90	1974	0.00	1987
	0.63	1860	and many years	
Normal	0.55	1861	prior.	
0.05	0.31	1980		
	0.22	1979		
Aug.	0.67	1953	0.00	1987
	0.59	1965	and many years	
Normal	0.57	1976	prior.	
0.09	0.35	1954		
	0.20	1896		
Sep.	3.62	1904	0.00	1987
	3.58	1918	and 31 other	
Normal	1.54	1982*	years prior.	
0.30	1.35	1957		
	1.26	1895		
Oct.	6.85	1962	0.00	1976
	6.02	1889	and 13 other	
Normal	4.46	1899	years prior.	
0.90	3.45	1876		
	3.01	1858		
Nov.	11.34	1885	0.00	1933
	7.44	1970	and 3 other	
Normal	7.13	1981	years prior.	
2.31	6.72	1864		
	6.69	1973		
Dec.	13.40	1852	0.00	1876
	12.85	1867	T#	1850
Normal	12.50	1849	0.22	1956
3.00	12.20	1955	0.23	1912
	11.81	1880	0.30	1975

* Also occurred earlier years. #T is less than 0.01 inch.
Normals are based on the Climatological Standard Normals 1951-1980.
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.

Precipitation:

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

July 1877 - December 1987

Day	JAN		FEB		MAR		APR	
	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	0.81	1938	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	0.78	1901	0.78	1924	1.80	1952	0.96	1896
7	1.02	1940	1.15	1958	0.74	1986	3.35	1935
8	1.05	1909	1.17	1985	1.37	1939	1.02	1926
9	1.92	1935	2.19	1962	2.62	1884	1.37	1884
10	1.12	1940	1.96	1919	1.44	1918	1.88	1982
11	1.44	1952	2.34	1936	1.18	1893	0.60	1886
12	1.65	1906	2.48	1904	1.30	1983	0.50	1884
13	1.84	1911	1.61	1926	2.38	1889	0.76	1942
14	1.69	1911	1.25	1962	1.47	1942	1.20	1963
15	2.25	1894	1.86	1891	2.20	1899	1.84	1880
16	1.53	1973	1.84	1986	1.15	1907	0.30	1957
17	1.90	1921	3.21	1986	0.73	1904	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	0.61	1981
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	1.08	1899	0.39	1917
23	2.50	1886	1.26	1891	1.55	1906	0.60	1896
24	1.76	1942	1.82	1917	0.77	1950	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.

Precipitation:

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

July 1877 - December 1987

Day	MAY		JUN		JUL		AUG	
	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	0.07	1984	0.01	1925	0.02	1899
5	1.94	1889	0.23	1934	0.04	1895	0.01	1974
6	0.89	1883	0.44	1953	T	1936	T	1961
7	1.31	1905	0.57	1927	0.03	1974	T	1964
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	0.03	1920	T	1935	0.15	1976
15	1.16	1892	0.60	1929	0.02	1975	0.28	1976
16	0.21	1883	0.18	1937	T	1917	0.02	1958
17	0.43	1879	0.03	1909	T	1912	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	0.61	1931	0.23	1914	T	1937	0.06	1904
25	0.77	1906	T	1925	T	1946	0.27	1954
26	0.30	1901	0.05	1971	T	1950	0.08	1954
27	1.02	1906	0.25	1899	T	1896	0.01	1949
28	0.36	1936	0.25	1952	0.01	1964	T	1949
29	0.26	1948	0.19	1952	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	0.80	1884	0.86	1974	0.67	1953

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

Precipitation:

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

July 1877 - December 1987

Day	SEP		OCT		NOV		DEC	
	24-Hr Pcpn.	Year	24-Hr Pcpn.	Year	24Hr 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	0.32	1900	1.37	1970	1.41	1881
5	0.18	1912	1.12	1924	0.78	1963	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	1.39	1906
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	0.24	1951	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	0.93	1960	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	0.24	1976	1.09	1981	2.20	1970	0.98	1965
29	0.80	1890	0.67	1964	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.

Precipitation:

GREATEST NUMBER OF DAYS WITH 0.01 INCH OR MORE, AND 0.10 INCH OR MORE BY MONTHS AND YEAR OF OCCURRENCE

Month	0.01 Inch or more			0.10 Inch or more		
	Average Number of Days	Greatest Number of Days	Year	Average Number of Days	Greatest Number of Days	Year
January	10	25	1909	7	20	1909
February	9	19	1902	5	15	1936
March	8	19	1983#	5	16	1983
April	5	16	1948	4	13	1948
May	3	10	1915	1	7	1915
June	1	7	1884	1	4	1884
July	@	3	1974	@	1	1980#
August	@	5	1976	@	3	1976
September	1	8	1982	1	5	1982
October	3	11	1889	2	10	1889
November	6	17	1984#	5	14	1984
December	10	23	1889	5	18	1889
Annual	57	98	1983	36	69	1983

GREATEST NUMBER OF DAYS WITH 0.50 INCH OR MORE, AND 1.00 INCH OR MORE BY MONTHS AND YEAR OF OCCURRENCE

Month	0.50 Inch or more			1.00 Inch or more		
	Average Number of Days	Greatest Number of Days	Year	Average Number of Days	Greatest Number of Days	Year
January	3	11	1911	1	5	1911
February	2	9	1878	1	5	1958
March	1	7	1983	@	3	1907
April	1	6	1880	@	3	1880
May	@	3	1883	@	1	1948#
June	@	1	1974	0	0	----
July	@	1	1974	0	0	----
August	@	1	1965#	0	0	----
September	@	3	1904	@	2	1904
October	@	5	1889	@	3	1889
November	2	6	1973#	@	4	1885
December	2	10	1880	1	5	1955
Annual	12	31	1983	3	11	1940

@ Less than one day.
# Also recorded earlier years.
Average Days of 0.01 inch from July 1877-December 1987.
Average Days of 0.50 inch from January 1951-December 1987.

Precipitation:

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.01 INCH OR MORE
(Periods with 12 or more days tabulated)
(1878-1987)

Days	Period	Total Rainfall
15	February 10-February 24, 1936	8.00
15	November 24-December 8, 1970	7.12
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)
(1878-1987)

Days	Period	Total Rainfall
10	December 17-December 26, 1884	10.34
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

Precipitation:

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.50 INCH OR MORE
(Periods with 4 or more days tabulated)
(1878-1987)

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)
(1878-1987)

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

Precipitation:

GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT MEASURABLE RAIN (Less than 0.01 inch) DURING AN ENTIRE YEAR (July 1877-December 1987)

Days	Period	Days	Period
194	May 13-Nov 22, 1880	145	May 13-Oct 4, 1924
174	Apr 18-Oct 8, 1903	144	May 21-Oct 11, 1987
162	May 25-Nov 2, 1960	143	Apr 27-Sep 16, 1959
160	May 9-Oct 15, 1886	140	May 12-Sep 28, 1890
155	May 31-Nov 1, 1932	138	Apr 21-Sep 5, 1887
147	May 7-Sep 30, 1926		

GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT MEASURABLE RAIN DURING THE LATE SUMMER, FALL AND PARTS OF THE WINTER SEASON (August 1877-December 1987)

Days	Period	Days	Period
82	Aug 6-Oct 26, 1974	63	Sep 7-Nov 8, 1925
82	Sep 7-Nov 27, 1887	62	Sep 11-Nov 11, 1952
81	Aug 11-Oct 30, 1913	60	Oct 18-Dec 16, 1984
72	Aug 1-Oct 11, 1987	59	Sep 16-Nov 14, 1888
68	Sep 1-Nov 7, 1915	56	Sep 1-Oct 26, 1964
67	Aug 5-Oct 10, 1899	55	Aug 31-Oct 25, 1896
64	Sep 30-Dec 2, 1890	52	Sep 28-Nov 18, 1905
63	Aug 12-Oct 13, 1965	51	Aug 20-Oct 10, 1968

GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT MEASURABLE RAIN DURING THE WINTER MONTHS (November 1877-February 1987)

Days	Period	Days	Period
44	Nov 15-Dec 28, 1976	36	Nov 15-Dec 20, 1958
42	Jan 17-Feb 27, 1899	34	Dec 5, 1956-Jan 7, 1957
41	Dec 18, 1962-Jan 27, 1963	32	Nov 2-Dec 3, 1956
38	Nov 4-Dec 11, 1959	31	Nov 1-Dec 1, 1933
38	Nov 8-Dec 15, 1940	30	Nov 8-Dec 7, 1969
38	Feb 15-Mar 24, 1883	30	Nov 15-Dec 14, 1936
36	Dec 18, 1960-Jan 22, 1961		

Precipitation:

*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 1987)

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 7 MONTHS WITHOUT MEASURABLE RAIN

1850-51...the driest water year that has occurred.

*WATER YEAR IN WHICH THERE WERE 5 OR MORE MONTHS
WITHOUT MEASURABLE RAIN
(July 1849-December 1987)

Season	Season
1850-51	1880-81
1852-53	1886-87
1856-57	1902-03
1872-73	1929-30

* 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.

Precipitation:

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 1987)

Month	5 Minutes	10 Minutes	30 Minutes	1 Hour	2 Hours	24 Hours
Jan.	0.25 07/1956	0.39 21/1967	0.59 25/1958	0.75 25/1958	1.09 21/1943	3.52 20-21/1943
Feb.	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
Mar.	0.29 30/1906	0.40 30/1906	0.80 30/1906	0.94 30/1906	1.01 30/1906	2.94 08-09/1884
Apr.	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
Jun.	0.08 19/1974*	0.13 06/1968	0.27 19/1974	0.37 19/1974	0.62 19/1974	0.82 11-12/1884
Jul.	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
Aug.	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
Sep.	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
Oct.	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
Nov.	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
Dec.	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
Annu-al	0.39 April 07/1935	0.62 April 07/1935	0.97 April 07/1935	1.65 April 07/1935	2.62 April 07/1935	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 49-51

Precipitation:

TABULATED RAINFALL DATA
*EXCESSIVE STORMS 1903-1987

TOTAL PRECIPITATION BY PERIODS

Year	Mnth	48 Hours Date	48 Hours Total	24 Hours Date	24 Hours Total	2 Hours Date	2 Hours Total	1 Hour Date	1 Hour Total
1962	Oct	12-13	6.42	12-13	5.07	13	0.85	12	0.57
1986	Feb	16-17	5.05	16-17	3.54	17	0.72	17	0.40
1986	Feb	17-18	5.01	17	3.21	18	1.01	18	0.52
1943	Jan	20-21	4.29	20-21	3.52	20	1.09	20	0.63
1981	Nov	12-13	4.09	12-13	2.61	13	0.57	12	0.32
1967	Jan	20-21	4.09	20-21	3.12	21	0.86	21	0.61
1982	Jan	3,4,5	4.00	4-5	3.50	5	0.45	4	0.25
1936	Feb	11-12	3.89	11	2.34	12	0.85	12	0.77
1935	Dec	18-19	3.81	18-19	3.28	18	0.59	18	0.31
1937	Dec	9-10 & 11	3.67	9-10	2.22	11	0.52	10	0.39
1940	Feb	26-27	3.65	26-27	3.32	27	0.53	27	0.28
1944	Feb	2-3	3.56	2-3	2.82	2	0.39	2	0.20
1911	Jan	13-14	3.53	13-14	3.31	14	0.38	14	0.21
1958	Apr	1-2	3.48	1-2	2.24	2	0.85	2	0.74
1970	Nov	28-29	3.48	28-29	2.45	28	0.54	28	0.30
1962	Feb	9-10	3.45	9-10	2.21	9	0.82	9	0.52
1916	Jan	2-3	3.41	2-3	3.21	3	0.74	3	0.36
1935	Apr	7	3.35	7	3.35	7	2.62	7	1.65
1955	Dec	22-23	3.25	22-23	2.36	22	0.58	22	0.38
1983	Dec	24-25	3.24	24-25	2.85	25	0.45	25	0.27
1931	Dec	26-27	3.23	26-27	2.98	26	0.38	26	0.20
1940	Dec	21-22	3.22	21	2.38	21	0.55	21	0.32
1918	Sep	12-13	3.17	12-13	3.14	12	0.72	12	0.38
1958	Feb	18-19	2.93	18-19	2.66	18	0.39	18	0.22
1964	Dec	21-22	2.92	21-22	1.89	22	0.40	22	0.23
1952	Jan	11-12	2.90	11-12	2.73	12	0.43	11	0.33
1964	Jan	20-21	2.86	20-21	2.30	20	0.83	20	0.49
1983	Mar	12-13	2.78	12-13	2.63	13	0.66	13	0.52
1978	Jan	13-14	2.65	13-14	1.98	13	0.61	13	0.43
1973	Feb	26-27	2.62	27	2.11	27	1.19	27	1.01
1950	Nov	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
Average*	0.05	0.09	0.30	0.90	2.31	3.00	(6.65)	4.18	2.94	2.18	1.44	0.35	0.13	17.87*
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	0.00	0.00	T	T	T	0.65	0.35	1.88	1.14	0.69	0.00	4.71
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	2.83	3.20	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	1.36	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	1.44	3.24	9.26	8.04	3.09	1.07	0.17	0.00	24.87
1878-79	0.00	0.00	0.29	0.55	0.51	0.47	1.82	3.18	3.89	4.88	2.66	1.30	0.13	17.86
1879-80	0.00	0.00	0.00	0.88	2.05	3.41	6.34	1.64	1.83	1.70	14.20	0.76	0.00	26.47

*Average precipitation is for the period 1951-1980.

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
Average*	0.05	0.09	0.30	0.90	2.31	3.00	(6.65)	4.18	2.94	2.18	1.44	0.35	0.13	17.87*
1880-81	0.00	0.00	0.00	0.00	0.05	11.81	11.86	6.14	5.06	1.37	1.64	0.00	0.50	26.57
1881-82	0.00	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	0.00	0.00	0.57	2.63	3.22	1.13	7.55	2.33	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	4.32	0.06	1.45	24.78
1884-85	0.00	0.00	0.60	2.01	0.00	10.45	13.06	2.16	0.49	0.08	0.68	0.00	0.11	16.58
1885-86	0.00	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	0.00	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	0.00	0.00	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	0.00	0.80	0.00	0.00	3.34	4.14	0.53	6.61	1.78	2.04	0.66	0.05	15.81
1891-92	0.00	0.00	0.10	0.10	0.48	3.28	3.96	1.78	2.84	3.02	1.20	2.38	0.00	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	0.00	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	0.00	0.00	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	0.00	1.26	0.17	1.54	1.54	4.55	9.76	0.09	2.57	5.34	0.92	0.00	23.23
1896-97	0.00	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	0.00	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	0.00	0.00	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	0.00	0.00	1.67	2.02	2.91	6.60	3.05	1.70	4.81	0.46	0.00	0.00	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	0.00	16.87
1904-05	0.00	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	0.00	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	0.00	0.20	0.00	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	0.00	1.20	0.04	3.33	4.57	3.84	2.75	0.42	0.08	0.54	0.00	12.20
1908-09	0.00	0.00	0.05	0.26	1.23	2.04	3.58	9.65	6.68	1.84	0.00	0.00	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	0.00	12.18

*Average precipitation is for the period 1951-1980.

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
Average	0.05	0.09	0.30	0.90	2.31	3.00	(6.65)	4.18	2.94	2.18	1.44	0.35	0.13	17.87*
1910-11	0.00	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	0.00	0.18	0.15	1.07	1.40	2.74	0.23	1.97	1.69	0.94	0.58	9.55
1912-13	0.00	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	0.00	0.01	0.00	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	0.00	0.82	0.47	3.44	4.73	3.76	4.26	1.20	0.50	2.75	0.00	17.20
1915-16	0.00	0.01	0.00	0.00	0.83	4.42	5.26	9.35	2.45	1.06	0.06	0.10	0.01	18.29
1916-17	0.07	0.00	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	0.00	0.00	0.51	0.00	0.25	0.45	1.21	0.97	3.36	4.00	1.06	0.01	0.00	10.61
1918-19	0.00	0.00	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	0.00	0.00	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	0.00	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	0.00	0.80	1.09	3.81	5.70	2.16	4.18	1.29	0.40	0.43	0.00	14.16
1922-23	0.00	0.00	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	0.00	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	0.00	0.00	0.00	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	0.00	1.13	1.50	2.67	3.20	5.52	0.05	4.25	0.36	0.00	16.05
1926-27	0.00	0.00	0.00	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	0.00	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	0.00	0.00	0.00	0.15	2.98	2.66	5.79	0.88	1.44	0.78	0.44	0.04	1.02	10.39
1929-30	0.00	0.00	0.00	0.15	0.00	4.06	4.21	3.65	1.62	2.86	0.94	0.34	0.00	13.62
1930-31	0.00	0.00	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	0.00	0.00	0.00	0.18	1.30	6.84	8.32	1.09	1.76	0.34	0.76	0.30	0.00	12.57
1932-33	0.00	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	0.00	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	0.00	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	0.00	0.00	0.00	1.22	0.77	2.18	4.17	3.80	8.59	1.33	1.69	0.68	0.27	20.53
1936-37	0.00	0.00	0.00	0.35	0.03	2.62	3.00	2.92	6.18	6.37	1.10	0.01	0.18	19.76
1937-38	0.00	0.00	0.00	0.87	2.69	4.06	7.62	3.50	8.24	3.92	1.51	0.04	0.00	24.83
1938-39	0.00	0.00	0.30	1.29	0.88	0.71	3.18	1.91	1.06	2.42	0.25	0.92	0.00	9.74
1939-40	0.00	0.00	0.35	0.45	0.07	1.15	2.02	7.98	9.25	4.22	0.68	0.92	0.00	25.07

*Average precipitation is for the period 1951-1980.

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
Average	0.05	0.09	0.30	0.90	2.31	3.00	(6.65)	4.18	2.94	2.18	1.44	0.35	0.13	17.87*
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	0.00	0.00	0.86	1.17	6.29	8.32	4.68	2.98	3.31	4.58	1.07	0.00	24.94
1942-43	0.00	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	0.00	0.00	0.00	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	0.00	1.39	3.54	2.31	7.24	1.82	4.49	2.83	0.08	0.55	0.05	17.06
1945-46	0.00	0.00	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	0.00	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	0.00	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	0.00	0.32	0.00	14.87
1949-50	0.00	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	0.00	0.00	0.62	2.35	5.50	4.72	13.19	2.45	1.57	0.84	0.85	0.64	0.00	19.54
1951-52	0.00	0.00	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	0.00	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	0.00	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	0.00	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	0.00	0.00	10.46
1959-60	0.00	0.00	1.54	0.00	0.01	1.28	2.83	3.25	2.91	1.62	1.26	0.41	0.00	12.28
1960-61	0.00	0.00	0.00	0.00	4.38	0.70	5.08	3.11	1.19	2.02	0.49	0.13	0.02	12.04
1961-62	0.00	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	0.00	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	0.00	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	0.00	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

*Average precipitation is for the period 1951-1980.

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
Average	0.05	0.09	0.30	0.90	2.31	3.00	(6.65)	4.18	2.94	2.18	1.44	0.35	0.13	17.87*
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							

*Average precipitation is for the period 1951-1980.

Precipitation:

NUMBER OF DAYS WITH MEASURABLE RAIN BY MONTH, WITH TOTAL PRECIPITATION FOR THE WATER YEAR*
(July 1877-December 1987)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Number Days	Total Rain
Average	#	#	1	3	6	10	10	9	8	5	3	1	57	17.87
1877-78	0	0	0	5	7	5	17	17	14	3	4	0	72	24.87
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.
# Less than one day.

Precipitation:

NUMBER OF DAYS WITH MEASURABLE RAIN BY MONTH, WITH TOTAL PRECIPITATION FOR THE WATER YEAR*
(July 1877-December 1987)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Number Days	Total Rain
Average	#	#	1	3	6	10	10	9	8	5	3	1	57	17.87
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.
# Less than one day.

Precipitation:

NUMBER OF DAYS WITH MEASURABLE RAIN BY MONTH, WITH TOTAL PRECIPITATION FOR THE WATER YEAR*
(July 1877-December 1987)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Number Days	Total Rain
Average	#	#	1	3	6	10	10	9	8	5	3	1	57	17.87
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.
# Less than one day.

Precipitation:

NUMBER OF DAYS WITH MEASURABLE RAIN BY MONTH, WITH TOTAL PRECIPITATION FOR THE WATER YEAR*
(July 1877-December 1987)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Number Days	Total Rain
Average	#	#	1	3	6	10	10	9	8	5	3	1	57	17.87
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								

* Water Year is the 12-month period beginning July 1 and ending June 30.
# Less than one day.

Precipitation:

10 WETTEST WATER YEARS
(JULY 1849-DECEMBER 1987)

Amount	Year
37.49	1982-83
36.35	1852-53
36.10	1861-62
36.00	1849-50
33.80	1889-90
32.79	1867-68
32.65	1981-82
32.27	1885-86
31.94	1957-58
31.83	1940-41

10 DRIEST WATER YEARS
(JULY 1849-DECEMBER 1987)

Amount	Year
4.71	1850-51
7.25	1975-76
7.53	1976-77
7.79	1863-64
7.99	1923-24
8.03	1912-13
8.12	1932-33
8.43	1930-31
8.47	1870-71
8.90	1919-20

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

Precipitation:

PERCENTAGE OF THE TIME PRECIPITATION IS GREATER THAN THE FOLLOWING AMOUNTS IN ANY GIVEN MONTH
(Based on precipitation records from July 1849-December 1950)

Precipitation in inches

Month	0.00	0.05	0.10	0.25	0.50	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
Jan	100%	100	100	99	96	88	69	54	32	23	17	13	08	05	01%
Feb	100%	99	99	94	87	80	53	40	29	19	13	08	04	01	00%
Mar	100%	98	98	96	89	80	53	36	21	10	08	04	03	01	00%
Apr	97%	96	91	82	68	53	22	13	09	02	01	01	01	01	01%
May	88%	78	70	59	39	17	08	01	00	00	00	00	00	00	00%
Jun	55%	35	29	19	09	02	00	00	00	00	00	00	00	00	00%
Jul	13%	07	05	04	03	00	00	00	00	00	00	00	00	00	00%
Aug	18%	09	05	03	02	00	00	00	00	00	00	00	00	00	00%
Sep	55%	42	36	27	18	05	01	01	00	00	00	00	00	00	00%
Oct	81%	76	63	51	30	13	04	02	01	01	00	00	00	00	00%
Nov	95%	92	90	85	76	61	40	25	15	11	06	02	01	01	01%
Dec	99%	99	99	97	92	82	62	46	31	21	15	13	09	07	06%

ANNUAL AMOUNTS

PERCENTAGE OF THE TIME OF HAVING ANNUAL PRECIPITATION AMOUNTS GREATER THAN THE FOLLOWING TOTALS

Precipitation in inches

	1.00	5.00	10.0	15.0	16.0	17.0	18.0	19.0	20.0	22.0	24.0	26.0	28.0	30.0	35.0
Annual	100%	99	90	68	61	53	49	38	34	27	21	13	07	07	07%

Precipitation:

SNOWFALL
OCCURRENCES OF SNOW IN SACRAMENTO
(January 1878-December 1987)

Year	Date	Total Snow	Year	Date	Total Snow
1879	Jan 13	T	1932	Dec 09	T
1880	Jan 26	0.2	1933	Jan 18	T
1882	Feb 17,18	T	1935	Mar 08	T
1883	Feb 01,06	T	1937	Jan 10,11,24,30	T
1888	Jan 04	1.0	1942	Mar 14	2.0
1888	Jan 05	2.5	1949	Feb 11	T
1888	Jan 16	0.5	1952	Jan 12	T
1896	Mar 02	T	1952	Feb 20	T
1899	Feb 02	T	1952	Mar 15	T
1907	Jan 06	0.4	1954	Mar 19	T
1911	Feb 26,27	T	1955	Apr 18,26	T
1911	Dec 29	T	1957	Jan 25,26	T
1913	Jan 09	0.1	1962	Jan 21	T
1916	Jan 01	3.0	1964	Jan 21	T
1916	Jan 27	0.5	1968	Dec 19,20,23	T
1925	Apr 20	T	1972	Dec 06,12	T
1930	Jan 12	1.0	1974	Jan 04	T
1932	Jan 12	1.0	1976	Feb 05	2.0
1932	Feb 01	0.5	1982	Mar 17	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.

VII. 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

and

NORMAL MAXIMUM, MINIMUM AND MEAN DAILY TEMPERATURES
SUNRISE AND SUNSET TABLE
MONTHLY NORMALS AND EXTREMES OF TEMPERATURE AND
PRECIPITATION
RAINFALL CHART
MAP OF THE SACRAMENTO AREA

Relative Humidity:

AVERAGE RELATIVE HUMIDITY BY TIME PERIODS

	4AM	10AM	4PM	10PM
Jan	90	86	72	87
Feb	88	79	62	82
Mar	85	70	53	77
Apr	81	58	44	73
May	80	50	35	69
Jun	78	47	31	64
Jul	76	47	28	61
Aug	78	50	29	63
Sep	77	51	32	65
Oct	80	57	39	70
Nov	86	75	59	81
Dec	90	85	71	87
Annual	82	63	46	73

Data based on the average humidities for the Sacramento Executive Airport (1959-1986).

Pressure:

AVERAGE SEA-LEVEL PRESSURE WITH THE HIGHEST AND LOWEST BY MONTH WITH DATE AND YEAR OF OCCURRENCE (July 1877-December 1987)

Month	Average	Highest	Date	Year	Lowest	Date	Year
Jan	30.07	30.64	24	1938	28.95	27	1916
Feb	30.02	30.74	17	1883	29.15	22	1891
Mar	29.98	30.56	2	1971	29.22	12	1906
Apr	29.94	30.45	4	1945	29.37	22	1931
May	29.87	30.34	12	1890	29.50	17	1949
Jun	29.82	30.22	25	1975*	29.54	29	1901
Jul	29.81	30.21	12	1888	29.55	8	1926
Aug	29.81	30.19	4	1976	29.49	26	1932
Sep	29.82	30.19	19	1950*	29.44	12	1927
Oct	29.92	30.42	28	1921	29.42	24	1951
Nov	30.03	30.53	18	1969*	29.20	30	1982
Dec	30.07	30.67	25	1879	29.23	22	1982
Annual	29.93	30.74	17 Feb	1883	28.95	27 Jan	1916

City Data used until July 1, 1939. Executive Airport thereafter.
* Occurred on earlier dates and years.

Sunshine, Cloudiness and Fog:

SUNSHINE, CLOUDINESS AND FOG
(Sacramento Executive airport 1948-1986)

Month	Sunshine	Sky Cover (Sunrise-Sunset)				Dense Fog		
	Percent Possible Sunshine	Avg. Amount of Sky Cover	Average Number of Days			Average Number of Days	Greatest Number of Days	
			Clear	Partly Cloudy	Cloudy		Days	Year
Jan	44%	7.2	6.2	5.8	19.0	10.0	23	1961
Feb	62%	6.3	7.6	6.9	13.7	5.4	13	1963*
Mar	72%	5.6	10.3	8.2	12.5	1.6	4	1979*
Apr	81%	4.6	12.6	9.2	8.1	0.4	2	1965*
May	89%	3.5	17.7	8.2	5.1	0.2	2	1971
Jun	93%	2.2	21.8	5.7	2.4	0.0	0	----
Jul	97%	1.1	26.9	3.2	1.0	0.0	0	----
Aug	96%	1.5	25.4	4.1	1.4	0.1	1	1966
Sep	93%	1.9	23.4	4.3	2.3	0.2	2	1963
Oct	85%	3.3	19.2	6.1	5.7	1.5	11	1962
Nov	63%	5.7	9.9	6.8	13.3	5.6	11	1982
Dec	46%	6.8	7.5	5.7	17.8	9.6	21	1985*
Annual	77%	4.1	188.6	74.3	102.3	34.8	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

Fog:

GREATEST NUMBER OF CONSECUTIVE DAYS WITH DENSE FOG
DURING NOVEMBER, DECEMBER, JANUARY AND FEBRUARY
(November 1949-December 1987)

Days	Period	Year	Days	Period	Year
17	Dec 12-Dec 28	1985	9	Jan 12-Jan 20	1965
13	Jan 13-Jan 25	1975	9	Jan 17-Jan 25	1961
11	Dec 3-Dec 13	1962	9	Nov 25-Dec 3	1949
10	Dec 2-Dec 11	1977	9	Feb 3-Feb 11	1954
10	Dec 27 1962-		8	Jan 29-Feb 5	1962
	Jan 5 1963	1963	8	Dec 14-Dec 21	1956
9	Jan 6-Jan 14	1986	8	Dec 14-Dec 21	1954
9	Feb 6-Feb 14	1971			

Only periods with 8 or more days are tabulated.

GREATEST NUMBER OF DAYS WITH DENSE FOG BY MONTHS
(Non-Consecutive)
(November 1949-December 1987)

Days	Period	Days	Period
23	Jan 1961	15	Jan 1975
21	Dec 1985	15	Jan 1972
20	Dec 1962	15	Jan 1965
19	Dec 1963	15	Jan 1964
19	Jan 1958	14	Dec 1986
17	Jan 1985	14	Jan 1986
16	Dec 1977	14	Jan 1963
16	Jan 1955	14	Jan 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.

Wind:

AVERAGE WIND SPEED, PREVAILING DIRECTION AND FASTEST MILE
BY MONTHS WITH DATE AND YEAR OF OCCURRENCE
(July 1877-December 1987)

Month	Average Speed	Prevailing Direction	Fastest Mile	Dir-ection	Date	Year
Jan	7.4	Southeast	60	Southeast	17	1954
Feb	7.7	S-Southeast	58	Southeast	9	1938
Mar	8.8	Southwest	66	South	14	1952
Apr	8.9	Southwest	45	Southwest	25	1955
May	9.3	Southwest	40	Southeast	6	1912
Jun	9.8	Southwest	47	Southwest	23	1950
Jul	9.0	S-Southwest	36	Southwest	12	1956
Aug	8.6	Southwest	38	Southwest	19	1954
Sep	7.7	Southwest	42	Northwest	16	1965
Oct	6.7	Southwest	68	Southeast	26	1950
Nov	6.3	N-Northwest	70	Southeast	13	1953
Dec	6.7	S-Southeast	70	Southeast	7	1952
Annual Average	8.0	Southwest				

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.

Average wind speed and direction is for the Executive airport (1948-1986).

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 measurment 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) =91mph.

Heating Degree Days:

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

SACRAMENTO EXECUTIVE AIRPORT
(July 1960-December 1987)

Month	Normal	Highest	Year	Lowest	Year
Jul	0	7	1974	0	Most
Aug	0	4	1964	0	Most
Sep	7	53	1986	0	1987*
Oct	82	191	1971	7	1983
Nov	360	532	1982	145	1981
Dec	601	749	1972	425	1983
Jan	611	736	1963	411	1986
Feb	412	486	1969	249	1963
Mar	366	449	1975	192	1986
Apr	229	456	1967	92	1977
May	83	187	1977	1	1976
Jun	21	40	1982	0	1987*
Season	2772	3149	1982-1983	2133	1983-1984

* Also occurred on earlier months and years.
Normals based on 1951-1980 temperature data.

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, say 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.

Cooling Degree Days:

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

SACRAMENTO EXECUTIVE AIRPORT
(January 1969-December 1987)

Month	Normal	Highest	Year	Lowest	Year
Jan	0	0	----	0	All
Feb	0	0	----	0	All
Mar	0	10	1986	0	Most
Apr	25	34	1987	0	1983*
May	80	183	1984	19	1977
Jun	207	319	1985	83	1982
Jul	329	419	1984	230	1982
Aug	301	409	1969	207	1980
Sep	208	375	1975	128	1985
Oct	48	100	1987	9	1982
Nov	0	8	1976	0	Most
Dec	0	0	----	0	All
Season	1198	1654	1975	737	1982

* Also occurred on earlier months and years.
Normals based on 1951-1980 temperature data.

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, say the average daily temperature of 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:

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

HIGHEST TEMPERATURE	DEG. 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	DEG. 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 4PM and 5PM 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.

Weather Extremes:

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:

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	-----	Not Available
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 northwest of Guam in the Eye of Typhoon "Tip"- October 12, 1979

Weather Extremes:

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	1064.3/31.43	Barrow, Alaska- January 3, 1970
North America	1067.6/31.53	Mayo (Yukon Territory), Canada- January 1, 1974
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:
Weather Extreme information, 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 December 1983).

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.

NORMAL MAXIMUM, MINIMUM AND MEAN TEMPERATURES BY DAYS
CLIMATOLOGICAL STANDARD NORMALS 1951-1980

Date	January Temperature Max	Min	Avg	Date	February Temperature Max	Min	Avg	Date	March Temperature Max	Min	Avg	Date	April Temperature Max	Min	Avg	Date	May Temperature Max	Min	Avg	Date	June Temperature Max	Min	Avg
1	53	39	46	1	57	42	50	1	63	45	54	1	68	46	57	1	76	50	63	1	84	55	69
2	52	39	46	2	58	42	50	2	63	45	54	2	69	47	58	2	76	51	63	2	84	55	70
3	52	39	46	3	58	42	50	3	63	45	54	3	69	47	58	3	76	51	64	3	84	56	70
4	52	39	46	4	58	43	50	4	64	45	54	4	69	47	58	4	77	51	64	4	84	56	70
5	53	39	46	5	58	43	51	5	64	45	54	5	69	47	58	5	77	51	64	5	85	56	70
6	53	39	46	6	59	43	51	6	64	45	54	6	70	47	58	6	77	51	64	6	85	56	70
7	53	39	46	7	59	43	51	7	64	45	54	7	70	47	58	7	77	51	64	7	85	56	71
8	53	40	46	8	59	43	51	8	64	45	54	8	70	47	59	8	78	52	65	8	85	56	71
9	53	40	46	9	60	43	51	9	64	45	54	9	70	47	59	9	78	52	65	9	85	56	71
10	53	40	46	10	60	43	52	10	64	45	55	10	71	47	59	10	78	52	65	10	86	57	71
11	53	40	46	11	60	44	52	11	64	45	55	11	71	48	59	11	79	52	65	11	86	57	71
12	53	40	46	12	60	44	52	12	65	45	55	12	71	48	59	12	79	52	66	12	86	57	72
13	53	40	46	13	60	44	52	13	65	45	55	13	71	48	60	13	79	52	66	13	86	57	72
14	53	40	47	14	61	44	52	14	65	45	55	14	71	48	60	14	79	52	66	14	87	57	72
15	53	40	47	15	61	44	53	15	65	45	55	15	72	48	60	15	80	53	66	15	87	57	72
16	53	40	47	16	61	44	53	16	65	45	55	16	72	48	60	16	80	53	66	16	87	57	72
17	54	40	47	17	61	44	53	17	65	45	55	17	72	48	60	17	80	53	67	17	87	58	72
18	54	40	47	18	61	44	53	18	65	45	55	18	72	48	60	18	80	53	67	18	88	58	73
19	54	40	47	19	62	44	53	19	66	45	56	19	73	49	61	19	81	53	67	19	88	58	73
20	54	40	47	20	62	44	53	20	66	45	56	20	73	49	61	20	81	54	67	20	88	58	73
21	54	40	47	21	62	44	53	21	66	45	56	21	73	49	61	21	81	54	67	21	88	58	73
22	54	41	48	22	62	44	53	22	66	45	56	22	73	49	61	22	81	54	68	22	89	58	73
23	55	41	48	23	62	44	53	23	67	45	56	23	74	49	62	23	81	54	68	23	89	58	74
24	55	41	48	24	63	45	54	24	67	45	56	24	74	49	62	24	82	54	68	24	89	58	74
25	55	41	48	25	63	45	54	25	67	45	56	25	74	49	62	25	82	54	68	25	89	59	74
26	55	41	48	26	63	45	54	26	67	46	56	26	75	50	62	26	82	54	68	26	90	59	74
27	56	41	49	27	63	45	54	27	67	46	57	27	75	50	62	27	82	55	68	27	90	59	74
28	56	41	49	28	63	45	54	28	68	46	57	28	75	50	63	28	83	55	69	28	90	59	75
29	56	42	49	29	63	45	54	29	68	46	57	29	75	50	63	29	83	55	69	29	91	59	75
30	57	42	49					30	68	46	57	30	76	50	63	30	83	55	69	30	91	59	75
31	57	42	50					31	68	46	57					31	83	55	69				
Avg.	54	40	47		61	44	52		65	45	55		72	48	60		80	53	66		87	57	72

NORMAL MAXIMUM, MINIMUM AND MEAN TEMPERATURE BY DAYS
CLIMATOLOGICAL STANDARD NORMALS 1951-1980

Date	July Temperature			Date	August Temperature			Date	September Temperature			Date	October Temperature			Date	November Temperature			Date	December Temperature		
	Max	Min	Avg		Max	Min	Avg		Max	Min	Avg		Max	Min	Avg		Max	Min	Avg		Max	Min	Avg
1	91	59	75	1	93	60	77	1	90	59	75	1	84	56	69	1	71	49	60	1	58	42	50
2	91	60	75	2	93	60	77	2	90	59	75	2	84	56	69	2	70	48	59	2	58	42	50
3	92	60	76	3	93	60	77	3	90	59	75	3	83	56	69	3	70	48	59	3	57	42	50
4	92	60	76	4	93	60	76	4	90	59	74	4	83	55	68	4	69	48	59	4	57	42	49
5	92	60	76	5	93	60	76	5	90	59	74	5	82	55	68	5	69	48	58	5	57	42	49
6	92	60	76	6	93	60	76	6	89	59	74	6	82	55	68	6	68	47	58	6	56	41	49
7	92	60	76	7	92	60	76	7	89	59	74	7	82	55	67	7	68	47	57	7	56	41	49
8	93	60	76	8	92	60	76	8	89	59	74	8	81	54	67	8	67	47	57	8	56	41	49
9	93	60	76	9	92	60	76	9	89	59	74	9	81	54	67	9	67	47	57	9	56	41	48
10	93	60	76	10	92	60	76	10	89	59	74	10	81	54	67	10	66	46	56	10	55	41	48
11	93	60	77	11	92	60	76	11	89	59	74	11	80	54	66	11	66	46	56	11	55	41	48
12	93	60	77	12	92	60	76	12	89	59	74	12	80	54	66	12	65	46	56	12	55	41	48
13	93	60	77	13	92	60	76	13	88	59	74	13	79	53	66	13	65	46	55	13	55	40	48
14	93	60	77	14	92	60	76	14	88	58	73	14	79	53	65	14	65	46	55	14	55	40	47
15	93	60	77	15	92	60	76	15	88	58	73	15	79	53	65	15	64	45	55	15	54	40	47
16	94	60	77	16	91	60	76	16	88	58	73	16	78	53	65	16	64	45	54	16	54	40	47
17	94	60	77	17	91	60	75	17	88	58	73	17	78	52	64	17	63	45	54	17	54	40	47
18	94	60	77	18	91	60	75	18	87	58	73	18	77	52	64	18	63	45	54	18	54	40	47
19	94	60	77	19	91	60	75	19	87	58	73	19	77	52	64	19	62	44	53	19	54	40	47
20	94	60	77	20	91	59	75	20	87	58	72	20	77	52	63	20	62	44	53	20	54	40	47
21	94	60	77	21	91	59	75	21	87	58	72	21	76	52	63	21	62	44	53	21	53	40	47
22	94	61	77	22	91	59	75	22	86	58	72	22	76	51	63	22	61	44	53	22	53	40	47
23	94	61	77	23	91	59	75	23	86	57	72	23	75	51	62	23	61	44	52	23	53	40	46
24	94	60	77	24	91	59	75	24	86	57	72	24	75	51	62	24	60	43	52	24	53	40	46
25	94	60	77	25	91	59	75	25	86	57	71	25	74	51	62	25	60	43	52	25	53	40	46
26	94	60	77	26	90	59	75	26	85	57	71	26	74	50	61	26	60	43	51	26	53	40	46
27	94	60	77	27	90	59	75	27	85	57	71	27	73	50	61	27	59	43	51	27	53	39	46
28	93	60	77	28	90	59	75	28	85	57	71	28	73	50	60	28	59	43	51	28	53	39	46
29	93	60	77	29	90	59	75	29	84	56	70	29	72	49	60	29	59	43	51	29	53	39	46
30	93	60	77	30	90	59	75	30	84	56	70	30	72	49	60	30	58	42	50	30	53	39	46
31	93	60	77	31	90	59	75					31	71	49	60					31	53	39	46
Avg.	93	60	77		92	60	76		88	58	73		78	53	65		64	45	55		55	40	48

SUNRISE AND SUNSET AT SACRAMENTO, CALIFORNIA

PACIFIC STANDARD TIME

DAY	JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		OCT.		NOV.		DEC.	
	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.
1	7 24	4 56	7 12	5 28	6 39	5 59	5 51	6 29	5 09	6 58	4 43	7 24	4 45	7 34	5 07	7 17	5 35	6 36	6 02	5 49	6 32	5 06	7 05	4 45
2	7 24	4 56	7 11	5 29	6 37	6 00	5 50	6 30	5 08	6 59	4 43	7 25	4 46	7 34	5 08	7 16	5 36	6 35	6 02	5 48	6 34	5 05	7 06	4 45
3	7 24	4 57	7 10	5 30	6 36	6 01	5 48	6 31	5 07	7 00	4 43	7 26	4 46	7 34	5 09	7 15	5 37	6 33	6 03	5 46	6 35	5 04	7 07	4 45
4	7 24	4 58	7 09	5 31	6 34	6 02	5 47	6 32	5 06	7 01	4 42	7 26	4 47	7 34	5 10	7 14	5 38	6 32	6 04	5 45	6 36	5 03	7 07	4 45
5	7 24	4 59	7 08	5 32	6 33	6 03	5 45	6 33	5 04	7 01	4 42	7 27	4 47	7 34	5 11	7 12	5 38	6 30	6 05	5 43	6 37	5 02	7 08	4 45
6	7 24	5 00	7 07	5 34	6 31	6 04	5 44	6 34	5 03	7 02	4 42	7 28	4 48	7 33	5 12	7 11	5 39	6 29	6 06	5 41	6 38	5 01	7 09	4 45
7	7 24	5 01	7 06	5 35	6 30	6 05	5 42	6 35	5 02	7 03	4 42	7 28	4 48	7 33	5 13	7 10	5 40	6 27	6 07	5 40	6 39	5 00	7 10	4 45
8	7 24	5 02	7 05	5 36	6 28	6 06	5 41	6 36	5 01	7 04	4 41	7 29	4 49	7 33	5 13	7 09	5 41	6 26	6 08	5 38	6 40	4 59	7 11	4 45
9	7 24	5 03	7 04	5 37	6 27	6 07	5 39	6 37	5 00	7 05	4 41	7 29	4 49	7 32	5 14	7 08	5 42	6 24	6 09	5 37	6 41	4 58	7 12	4 45
10	7 24	5 04	7 03	5 38	6 25	6 08	5 38	6 38	4 59	7 06	4 41	7 30	4 50	7 32	5 15	7 07	5 43	6 22	6 10	5 35	6 42	4 57	7 13	4 45
11	7 24	5 05	7 02	5 39	6 24	6 09	5 36	6 39	4 58	7 07	4 41	7 30	4 51	7 32	5 16	7 05	5 44	6 21	6 11	5 34	6 43	4 56	7 13	4 45
12	7 23	5 06	7 01	5 40	6 22	6 10	5 35	6 40	4 57	7 08	4 41	7 31	4 51	7 31	5 17	7 04	5 45	6 19	6 12	5 33	6 44	4 55	7 14	4 45
13	7 23	5 07	7 00	5 42	6 21	6 11	5 33	6 41	4 56	7 09	4 41	7 31	4 52	7 31	5 18	7 03	5 45	6 18	6 13	5 31	6 46	4 55	7 15	4 45
14	7 23	5 08	6 58	5 43	6 19	6 12	5 32	6 42	4 55	7 10	4 41	7 32	4 53	7 30	5 19	7 02	5 46	6 16	6 14	5 30	6 47	4 54	7 16	4 46
15	7 22	5 09	6 57	5 44	6 18	6 13	5 30	6 42	4 54	7 11	4 41	7 32	4 54	7 30	5 20	7 00	5 47	6 15	6 15	5 28	6 48	4 53	7 16	4 46
16	7 22	5 10	6 56	5 45	6 16	6 14	5 29	6 43	4 54	7 12	4 41	7 32	4 54	7 29	5 21	6 59	5 48	6 13	6 16	5 27	6 49	4 52	7 17	4 46
17	7 22	5 11	6 55	5 46	6 15	6 15	5 27	6 44	4 53	7 12	4 41	7 33	4 55	7 29	5 22	6 58	5 49	6 11	6 17	5 25	6 50	4 52	7 18	4 47
18	7 21	5 12	6 53	5 47	6 13	6 16	5 26	6 45	4 52	7 13	4 41	7 33	4 56	7 28	5 22	6 57	5 50	6 10	6 18	5 24	6 51	4 51	7 18	4 47
19	7 21	5 13	6 52	5 48	6 12	6 17	5 25	6 46	4 51	7 14	4 41	7 33	4 57	7 27	5 23	6 55	5 51	6 08	6 19	5 23	6 52	4 50	7 19	4 47
20	7 20	5 14	6 51	5 49	6 10	6 18	5 23	6 47	4 50	7 15	4 41	7 33	4 57	7 27	5 24	6 54	5 52	6 07	6 20	5 21	6 53	4 50	7 20	4 48
21	7 20	5 15	6 50	5 50	6 08	6 19	5 22	6 48	4 50	7 16	4 42	7 34	4 58	7 26	5 25	6 52	5 53	6 05	6 21	5 20	6 54	4 49	7 20	4 48
22	7 19	5 16	6 48	5 51	6 07	6 20	5 21	6 49	4 49	7 17	4 42	7 34	4 59	7 25	5 26	6 51	5 53	6 03	6 22	5 19	6 55	4 49	7 21	4 49
23	7 19	5 18	6 47	5 52	6 05	6 21	5 19	6 50	4 48	7 18	4 42	7 34	5 00	7 25	5 27	6 50	5 54	6 02	6 23	5 17	6 56	4 48	7 21	4 49
24	7 18	5 19	6 46	5 54	6 04	6 22	5 18	6 51	4 48	7 18	4 42	7 34	5 01	7 24	5 28	6 48	5 55	6 00	6 24	5 16	6 57	4 48	7 21	4 50
25	7 17	5 20	6 44	5 55	6 02	6 23	5 17	6 52	4 47	7 19	4 43	7 34	5 01	7 23	5 29	6 47	5 56	5 59	6 25	5 15	6 59	4 47	7 22	4 50
26	7 17	5 21	6 43	5 56	6 01	6 23	5 15	6 53	4 46	7 20	4 43	7 34	5 02	7 22	5 30	6 45	5 57	5 57	6 26	5 13	7 00	4 47	7 22	4 51
27	7 16	5 22	6 41	5 57	5 59	6 24	5 14	6 54	4 46	7 21	4 43	7 34	5 03	7 21	5 30	6 44	5 58	5 55	6 27	5 12	7 01	4 46	7 23	4 52
28	7 15	5 23	6 40	5 58	5 57	6 25	5 13	6 55	4 45	7 21	4 44	7 34	5 04	7 20	5 31	6 42	5 59	5 54	6 28	5 11	7 02	4 46	7 23	4 52
29	7 14	5 24	6 40	5 59	5 56	6 26	5 11	6 56	4 45	7 22	4 44	7 34	5 05	7 20	5 32	6 41	6 00	5 52	6 29	5 10	7 03	4 46	7 23	4 53
30	7 14	5 26			5 54	6 27	5 10	6 57	4 44	7 23	4 45	7 34	5 06	7 19	5 33	6 39	6 01	5 51	6 30	5 09	7 04	4 46	7 23	4 54
31	7 13	5 27			5 53	6 28			4 44	7 24			5 06	7 18	5 34	6 38			6 31	5 07			7 24	4 55

Add one hour for Daylight Saving Time if and when in use.

MONTHLY NORMALS AND EXTREMES
OF TEMPERATURES
FOR
DOWNTOWN SACRAMENTO

	NORMAL			EXTREMES									
Mon.	Normal Mnthly Max.	Normal Mnthly Min.	Normal Monthly	Record Monthly Max.	Year	Record Monthly Min.	Year	Record Daily Max.	Date	Year	Record Daily Min.	Date	Year
Jan	53.9	40.2	47.1	62.1	1976	30.4	1949	74	31	1976	19	15*	1888
Feb	60.6	43.7	52.2	66.8	1985	36.4	1880	80	27	1985	21	13	1884
Mar	65.4	45.2	55.3	73.2	1934	38.9	1880	90	31	1966	29	15	1880
Apr	71.9	48.2	60.1	80.8	1987	42.3	1929	96	27	1987*	34	8	1953*
May	79.7	52.8	66.3	88.6	1984	47.2	1899	107	28	1984	37	3	1950*
Jun	87.1	57.3	72.2	94.6	1985	52.1	1910	112	30	1934	43	1	1929
Jul	93.1	60.0	76.6	98.0	1984	54.3	1887	114	17	1925	47	3	1901
Aug	91.5	59.6	75.6	97.8	1967	53.5	1911	111	13	1933	48	13	1921*
Sep	87.6	58.1	72.9	94.0	1984	52.0	1910	109	2	1955*	44	25	1934*
Oct	78.0	52.6	65.3	83.9	1917	46.2	1916	102	6	1987*	34	28	1946*
Nov	64.1	45.3	54.7	70.7	1929	38.0	1880	86	2*	1966	27	28	1880
Dec	54.6	40.4	47.5	68.0	1958	33.4	1932	72	5	1979*	17	11	1932
Year	74.0	50.3	62.2	98.0	Jul 1984	30.4	Jan 1949	114	Jul 17	1925	17	Dec 11	1932

Note: Normals are based on records for the 1951-1980 period.
Extremes are from July 1 1877 to present.
*Also occurred on earlier dates or years.

MONTHLY NORMALS AND EXTREMES
OF PRECIPITATION
FOR
DOWNTOWN SACRAMENTO

	WATER EQUIVALENT								SNOW, ICE PELLETS				
Mon.	Nor-mal	Maxi-mum Month	Year	Mini-mum Month	Year	Max.# in 24Hrs	Date	Year	Maxi-mum Month	Year	Max.# in 24Hrs	Date	Year
Jan	4.18	15.04	1862	0.15	1889	3.52	20,21	1943	4.0	1888	3.5	4,5	1888
Feb	2.94	10.30	1986	0.04	1899	3.54	16,17	1986	2.0	1976	2.0	5	1976
Mar	2.18	10.00	1850	0.03	1956	2.94	8,9	1884	2.0	1942	2.0	14	1942
Apr	1.44	14.20	1880	T	1949*	7.24	20,21	1880	T	1955*	T	18,26	1955*
May	0.35	3.25	1889	0.00	1982*	1.94	5	1889	0				
Jun	0.13	1.45	1884	0.00	1987*	0.82	11,12	1884	0				
Jul	0.05	0.90	1974	0.00	1987*	0.89	7,8	1974	0				
Aug	0.09	0.67	1953	0.00	1987*	0.67	29	1953	0				
Sep	0.30	3.62	1904	0.00	1987*	3.14	11,12	1918	0				
Oct	0.90	6.85	1962	0.00	1976*	5.07	12,13	1962	0				
Nov	2.31	11.34	1885	0.00	1933*	4.29	17,18	1885	0				
Dec	3.00	13.40	1852	0.00	1876	3.27	18,19	1955	T	1972*	T	6,12	1972*
Year	17.87	15.04	1862	0.00		7.24	Apr 20,21	1880	4.0	1888	3.5	Jan 4,5	1888

Note: Normals are bases on records for the 1951-1980 period.
Extremes are from July 1849 to present.
*Also occurred on earlier dates or years.
#24-hour precipitation totals are for any 24-hour period and should not be confused with midnight-to-midnight figures found elsewhere in the book.

Snow and Ice Pellets are based on City office records from January 1878-December 1950. Executive Airport data is used thereafter.

NORMAL DEGREE DAYS
NORMAL RELATIVE HUMIDITY
MEAN WIND
AND
WIND EXTREMES

Mon.	Normal(@) Degree Days Base 65° F		Relative(@) Humidity				Mean(+) Wind		Fastest(#) Mile			
	Heating	Cooling	Hr. 04 (Local Time)	Hr. 10 (Local Time)	Hr. 16 (Local Time)	Hr. 22 (Local Time)	Mean Speed (Mph)	Prevailing Drctn.	Speed (Mph)	Drctn.	Date	Year
Jan	611	0	90	86	72	87	7.4	SE	60	SE	17	1954
Feb	412	0	88	79	62	82	7.7	SSE	58	SE	9	1938
Mar	366	0	85	70	53	77	8.8	SW	66	S	14	1952
Apr	229	25	81	58	44	73	8.9	SW	45	SW	25	1955
May	83	80	80	50	35	69	9.3	SW	40	SE	6	1912
Jun	21	207	78	47	31	64	9.8	SW	47	SW	23	1950
Jul	0	329	76	47	28	61	9.0	SSW	36	SW	12	1956
Aug	0	301	78	50	29	63	8.6	SW	38	SW	19	1954
Sep	7	208	77	51	32	65	7.7	SW	42	NW	16	1965
Oct	82	48	80	57	39	70	6.7	SW	68	SE	26	1950
Nov	360	0	86	75	59	81	6.2	NNW	70	SE	13	1953
Dec	601	0	90	85	71	87	6.7	SSE	70	SE	7	1952
Year	2772	1198	82	63	46	73	8.0	SW	70	SE	Nov 13	1953*

(@) Normal Degree Days for the Sacramento Executive airport (1951-1980).
Normal Relative Humidity for Executive airport (1959-1986).

(+) Mean Wind Speed and Direction for Executive airport (1948-1986).

(#) Wind Extremes are the fastest 1-minute observed wind speed taken from a multiple register. Sacramento City office records were used from July 1877-January 1950, when official wind measurements were discontinued. Executive airport wind data was used from that point on.

(*) Also occurred on earlier years.

MISCELLANEOUS STATISTICS

Mon.	SUNRISE TO SUNSET#					MEAN NUMBER OF DAYS (Downtwn Sacramento)				MEAN NUMBER OF DAYS#		MEAN NUMBER OF DAYS (Downtwn Sacramento)			
						Precipitation (Inches)						Temperature F			
	% Psbl Sunshine	Mean Sky Cover (Tenths)	Clr	Ptly Cldy	Cldy	0.01 or More	0.10 or More	0.50 or More	1.00 or More	Thunder Storms (1/10)	Dense Fog	90 or Above	100 or Above	105 or Above	32 or Below
Jan	44	7.2	6	6	19	10	7	3	1	0.4	10.3	0	0	0	3.0
Feb	62	6.3	8	7	14	9	5	2	1	0.5	5.4	0	0	0	*
Mar	72	5.6	10	8	13	8	5	1	0	0.8	1.6	*	0	0	*
Apr	81	4.6	13	9	8	5	4	1	0	0.8	0.4	1	0	0	0
May	89	3.5	18	8	5	3	1	0	0	0.4	0.2	7	1	*	0
Jun	93	2.2	22	6	2	1	1	0	0	0.2	0.0	13	4	1	0
Jul	97	1.1	27	3	1	0	0	0	0	0.2	0.0	22	6	2	0
Aug	96	1.5	25	4	1	0	0	0	0	0.1	0.1	21	5	1	0
Sep	93	1.9	23	4	2	1	1	0	0	0.5	0.2	13	2	*	0
Oct	85	3.3	19	6	6	3	2	0	0	0.3	1.5	3	*	0	0
Nov	63	5.7	10	7	13	6	5	2	0	0.3	5.6	0	0	0	*
Dec	46	6.8	8	6	18	10	5	2	1	0.2	9.6	0	0	0	3.0
Year	77%	4.1	189	74	102	57	36	12	3	4.6	34.8	79	17	4	6.0

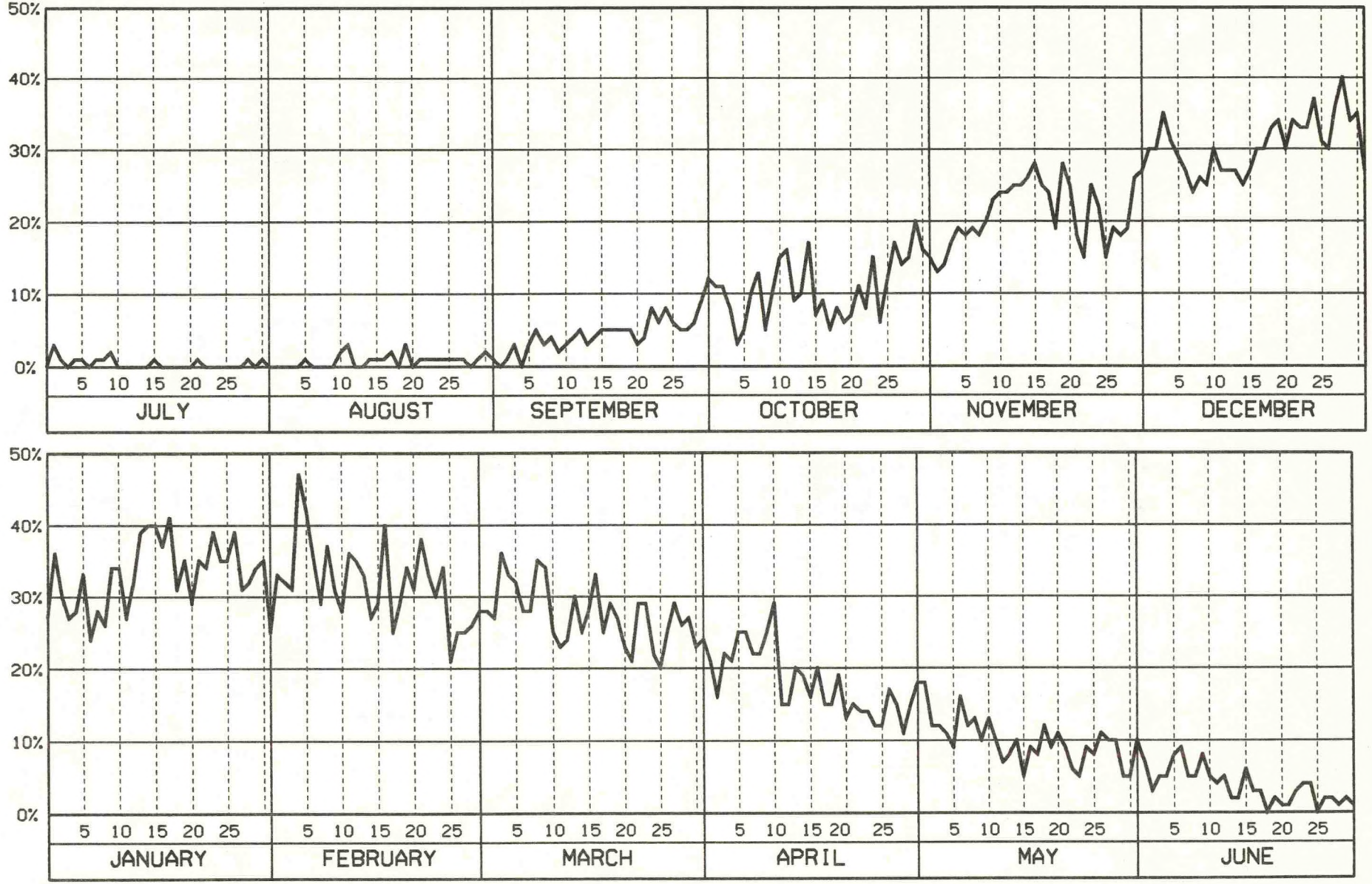
Sacramento Executive airport (1948-1986).

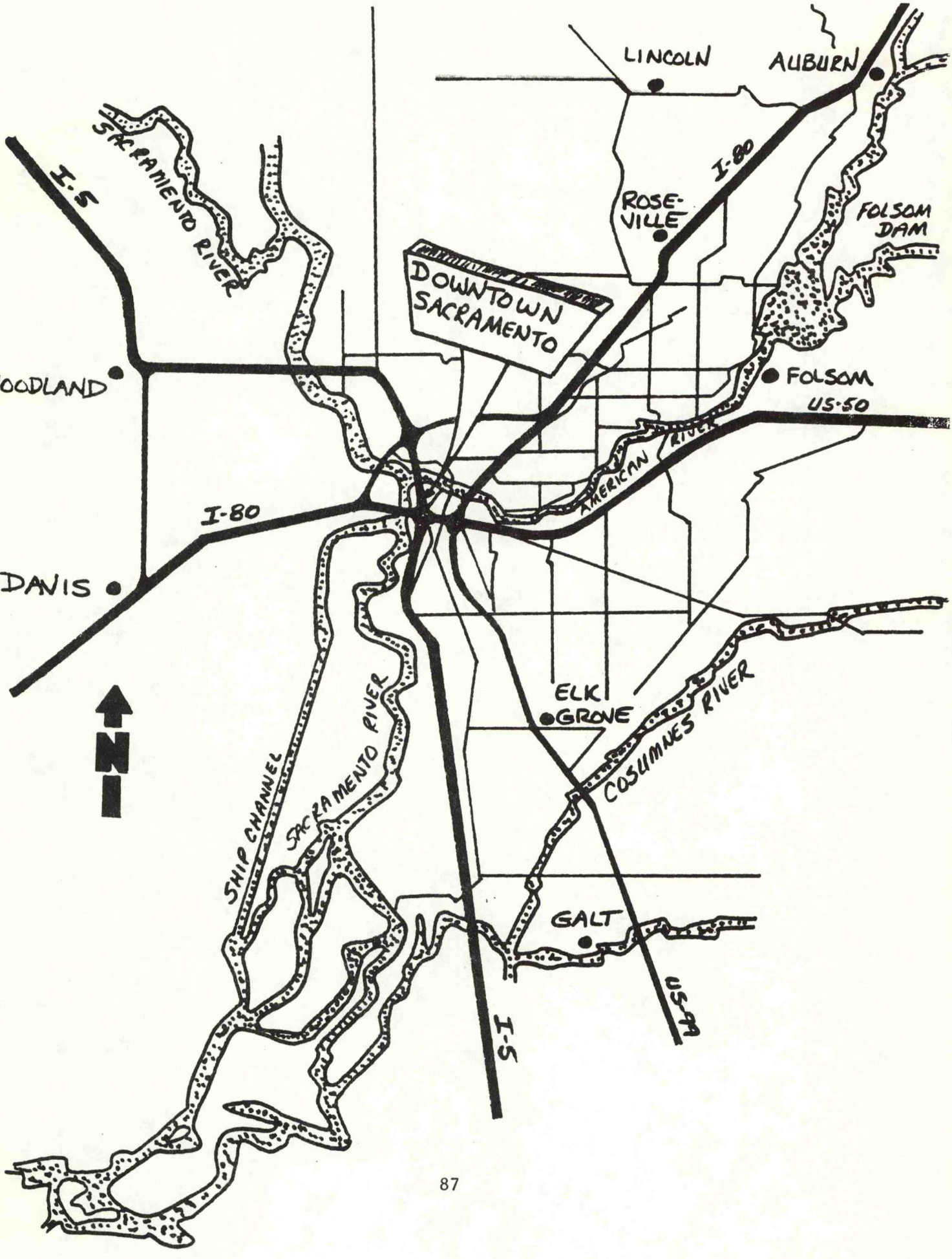
Precipitation and temperature averages are for Downtown Sacramento.
0.01-inch amounts are from July 1877-present.
Other catagories are from January 1951-present.
Temperature means are from 1958-present.

CLR 0/10 TO 3/10 sky cover
PTLY CLDY 4/10 to 7/10 sky cover
CLDY 8/10 to 10/10 sky cover

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)




LINCOLN
AUBURN
I-5
SACRAMENTO RIVER
I-80
ROSE-VILLE
FOLSOM DAM
DOWNTOWN SACRAMENTO
WOODLAND
FOLSOM
US-50
AMERICAN RIVER
I-80
DAVIS
ELK GROVE
COSUMNES RIVER
N
SHIP CHANNEL
SACRAMENTO RIVER
GALT
US-99
I-5