NOAA Technical Memorandum NWS WR-65
(Revised)

CLIMATE OF SACRAMENTO, CALIFORNIA

Tony Martini
Weather Service Office
Sacramento, California
April 1989

Fourth Revision

U.S. DEPARTMENT OF COMMERCE / National Oceanic and Atmospheric Administration / National Weather Service

NOAA Technical Memorandum NWS WR-65
(Revised)

CLIMATE OF SACRAMENTO, CALIFORNIA

Tony Martini
Weather Service Office
Sacramento, California

April 1989
Fourth Printing

UNITED STATES DEPARTMENT OF COMMERCE
Robert A. Mosbacher, Secretary

National Oceanic and Atmospheric Administration
William E. Evans, Administrator

National Weather Service
Elbert W. Friday, Jr., Director

This publication has been reviewed

and is approved for publication by

Scientific Services Division

Western Region

Kenneth B. Mielke, Acting Chief
Scientific Services Division
Western Region Headquarters
Salt Lake City, Utah

Special thanks to the staff of the
Division of Flood Management,
California Department of Water Resources,
who arranged for the printing of this publication.

Special thanks also goes to Bob Zettlemoyer,
Senior Engineer,
California Department of Water Resources,
whose computer program was invaluable in
making this publication possible.

CONTENTS

CONTENTS (Continued)

CONTENTS (Continued)

VII. Miscellaneous Statistics (Continued) Page

CLIMATE OF SACRAMENTO, CALIFORNIA

I. NARRATIVE CLIMATOLOGICAL SUMMARY.

Sacramento and the lower Sacramento Valley are blessed with a mild climate and an abundance of sunshine the year-round. The summers are virtually cloudless with warm, dry days and mild, pleasant nights. During the winter "rainy season" (November through February), over half the total annual precipitation falls, yet rain in measurable amounts occurs only about 10 days monthly during the winter. Mountains surround the Sacramento Valley to the west, north and east. The Sierra Nevada snowfields are only 70 miles east of Sacramento and usually provide a plentiful supply of water to the valley streams during the dry season. Because of the shielding influence of the high mountains, winter storms reach the valley in a modified form. However, torrential rain and heavy snow frequently fall on the western Sierra slopes, the southern Cascades, and to a lesser extent, the Coastal Range. As a result, flood conditions occasionally occur along the Sacramento River and its tributaries. Excessive rainfall and damaging wind storms 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 delta, at 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 by compression 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 usually followed within two or three days by the normally cool southwest delta 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 San Francisco Bay through the delta. The exception is when the north or northeasterly pressure difference develops during heat waves, causing light northerly breezes to continue through the night.

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

Thunderstorms in Sacramento are few in number and usually occur in the late fall or in the spring. Snow is so rare and falls in such small amounts that its occurrence may be disregarded as a climatic feature. Dense fog occurs mostly in midwinter, seldom in the spring or autumn, and never in the summer. Light and moderate fog is more frequent and may happen anytime during the wet, cold season. Fog is usually of the radiational cooling type and is confined to the early morning hours. Under stagnant atmospheric conditions, winter fog can become very persistent and may continue for several days.

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

II. A HISTORY OF WEATHER OBSERVATIONS AT SACRAMENTO

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

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

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

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

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

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

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

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

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

Office locations (cont'd)

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

1416 9th Street (Resources Building), September 29, 1964 to present. (Note: The temperature and precipitation sensors used for much of the information in this publication are currently located on top of the Post Office Building on 9th and I Streets. The data is remoted to the Weather Service Office in the Resources Building).

As the complexity of living changed over the past century, so did the services provided by the Sacramento weather office. Local forecasts now cover the foothills of the Sierra Nevada, as well as the lower Sacramento Valley. The office's warning responsibility area encompasses 16 counties in northern and central California. Special, detailed forecasts for agriculture, forestry, hydrology, and winter trans-Sierra Nevada travel 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 of importance to state and federal agencies involved in major river flood warning and control, and forestry operations, for example.

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

III. SOME HIGHLIGHTS OF THE WEATHER RECORDS IN SACRAMENTO

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

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

The longest consecutive stretch of days with maximum temperatures 105 degrees or higher in Sacramento was six days. This occurred June 11-June 16, 1985.

The greatest number of consecutive days with maximum temperatures 100 degrees or higher is nine. This has happened three

times since temperature records began in July 1877:

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

Heat waves having one-or two-day breaks between consecutive 100 degree-plus days have taken place quite frequently in the past. Two periods stand out significantly, however, and occurred during the summers of 1929 and 1980. In 1929, days with maximum temperatures 100 degrees or higher were recorded from June 20 through June 26, and again from June 29 through July 5. The two-day break on the 27th and 28th had maximum temperatures of 99 degrees, and 91 degrees, respectively. In all, the period had 14 out of 16 days with maximum temperatures 100 degrees or higher.

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

The coldest temperature ever recorded in the downtown area was on December 11, 1932, when the mercury plunged to 17 degrees above zero. The record-low temperature 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 and Orangevale citrus orchards where temperatures dipped as low as 11 degrees above zero. Oranges were frozen solid and many trees died. The celery and lettuce crops in the delta were also hard hit. Ice thick enough for skating formed on the small lakes and ponds at Southside and McKinley Parks, with a layer of ice one-sixteenth of an inch thick reported on the Sacramento River. The cold spell broke on December 16 when a warm and moist storm from the mid-Pacific moved into northern California.

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

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

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

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

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

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

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

IV. A RECAP OF THE YEAR 1987-88.

The 1987-88 Water Year got off to a fast start in Sacramento, due primarily to localized heavy thunderstorms in October 1987. Cold Pacific storms came late, however, with the first significant storm of the season arriving about mid-November.

December 1987 was wet and cold over much of the state. Sacramento had 15 days with measurable rain. The highlight of December was, however, the cold mid-month storm which brought heavy snow to the mountains of southern California. Traces of snow were even reported at extremely low elevations and at the least-expected locations (Beverly Hills and Malibu, for example).

The cold winter storms of late 1987 continued through the first half of January 1988. Measurable rain was recorded on 11 days through January 17 in Sacramento. In the Sierra Nevada, the snowpack deepened to fairly respectable values. There was every reason to be optimistic for an adequate water year, based on the accumulated precipitation over northern California through mid January. This was especially important since the 1986-87 Water Year had been so dry.

Suddenly the rains ceased. Strong high pressure formed just off the West Coast behind a particularly intense mid-January storm. Little did we know that the high would persist for what seemed like an eternity, resulting in long periods of monotonously warm and dry days statewide. In Sacramento, there were only five days with measurable rain from January 17 through April 18. Two extremely dry periods stood out during this stretch, when no measurable rain was recorded in downtown Sacramento: January 20 through February 27 (27 consecutive days), and March 2 through April 12 (42 consecutive days).

Warm and dry weather continued through the first two weeks of April. After that, cold, winterlike storms from the Gulf of Alaska moved through the state. Although most welcome, they brought only temporary relief to the drought-stricken area.

May and early June had their share of unusually cold storms from the Gulf of Alaska as well. The most significant of these occurred over the Memorial Day weekend and during the first week of June, bringing unseasonably cold and snowy weather to the Sierra Nevada.

The long, hot summer of 1988 featured two major weather events: the record-heat of July (warmest month on record in Sacramento), and the inordinate number of days with maximum temperatures 100 degrees or higher. (On the following page, a monthly breakdown illustrates the number of days with maximum temperatures 90, 100, and 105-degrees or higher in 1988).

NUMBER OF DAYS WITH MAXIMUM TEMPERATURES 90, 100 AND 105 DEGREES OR HIGHER IN 1988

Month	90 Deg.	100 Deg.	105 Deg.
Mar	1	0	0
Apr	2	0	0
May	7	2	0
Jun	18	8	3
Jul	29#	17#	10#
Aug	21	10	2
Sep	18	4	2
Oct	8	0	0
Total	104	41*	18*
Average (1959-1988)	80	19	4

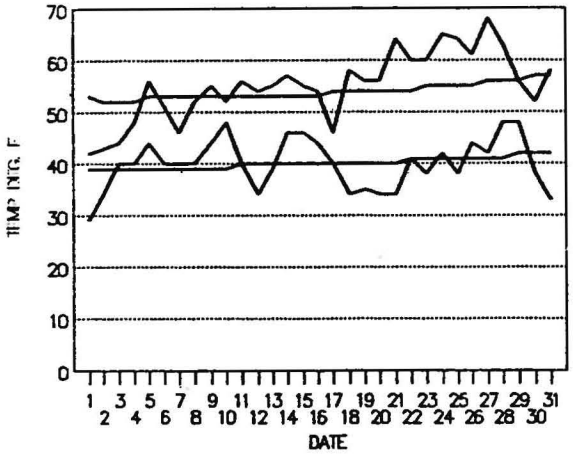
Record-number of days for the month.
* Record-number of days for the April-October period.

Record warmth began early in 1988 as the long mid-winter and early-spring drought gripped the West. A host of daily temperatures were set in February, leading to a record-high average monthly temperature of 67.6 degrees. In March, the high temperature of 90 degrees on the 26th not only was a record-high for the date, it also marked the earliest date of a 90-degree or higher occurrence.

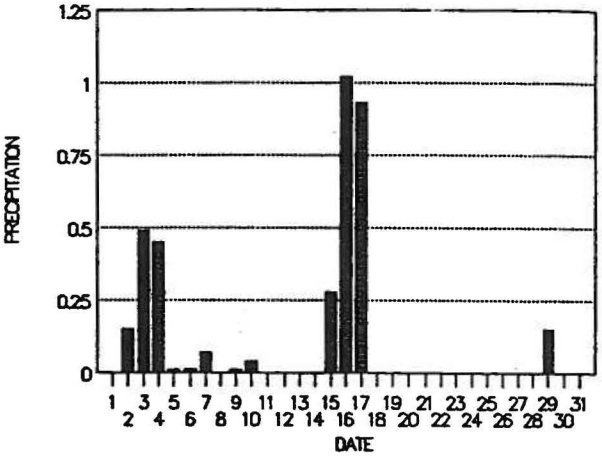
With the exception of a few periods (mid-April through the first week of June), maximum temperatures were generally above normal from about mid-January through the third week of October.

The following pages contain monthly summaries of weather conditions in Sacramento. Included in the summaries are graphs depicting the daily maximum and minimum temperatures, as well as daily normals. Daily precipitation for each month is shown in the bar graphs.

JANUARY 1988
TEMPERATURES



JANUARY 1988
PRECIPITATION



A series of fast-moving weather fronts brought rain, wind and snow to northern California through the first ten days of January. Sacramento had measurable rain on eight days of the period. After a temporary break, a three-day rain from the 15th through the 17th produced just over two inches of rain (2.33 inches). Warm and dry weather then prevailed from the 18th through the end of the month. The exception was on the 29th when light rain (0.15 inches) was recorded.

Highlight of the month was the unusually deep low pressure area that developed west of Santa Barbara on the 17th. All-time record-low barometric pressure readings were established on that date at the following locations:

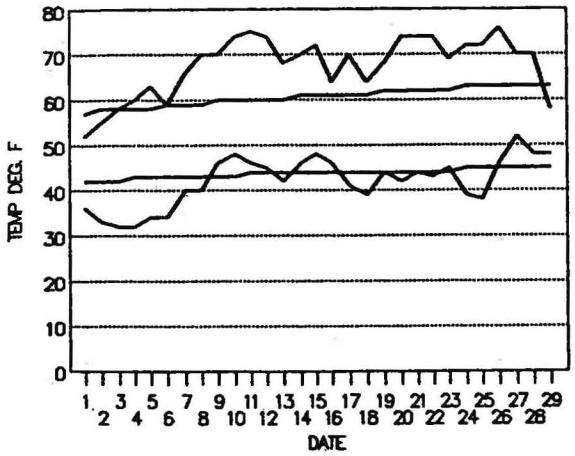
Santa Maria	29.20 inches
Los Angeles	29.25 inches
Bakersfield	29.27 inches

Coastal flooding and damage were widespread from Los Angeles to San Diego due to high seas, high tide and heavy rain.

January's rainfall in Sacramento totaled 3.61 inches, or 0.57 inches below normal. The average monthly temperature was 47.6 degrees, which was 0.5 degrees above normal.

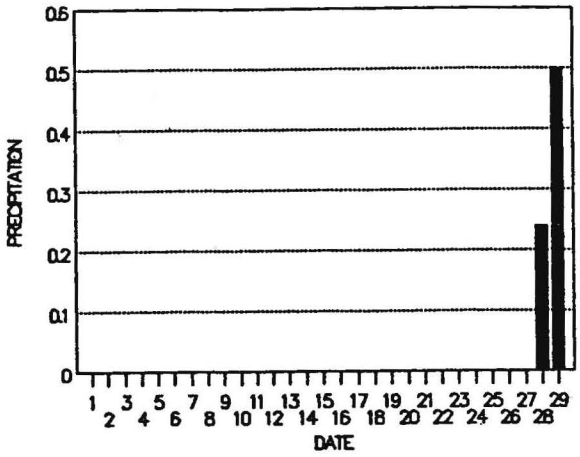
FEBRUARY 1988

TEMPERATURES



FEBRUARY 1988

PRECIPITATION



A strong ridge of high pressure persisted throughout much of February, resulting in a very warm and dry month. The high pressure weakened near the end of the month, allowing much-needed rain to move into the area from southern California.

Weatherwise, February was an eventful month. Some of the more significant highlights were:

There were 29 consecutive days without rain from January 29 through February 27. This was the sixth-longest stretch of consecutive rainless days during a December-March period.

The 40 of 41 days without rain (January 18-February 27) was the fourth-longest extended dry period interrupted by a one-day rain. (The one-day rain occurred on January 29 and amounted to 0.15 inches).

The average maximum temperature was 67.6 degrees, which was the warmest average maximum temperature for February on record.

Severe thunderstorms occurred during the early morning of the 28th.

A number of daily maximum temperature records were broken during the month (listed on the following page).

DAILY TEMPERATURE RECORDS SET IN FEBRUARY

Date	Max Temp.	Pre-vious	Year
8	70	68	1917
9	70	67	1987
10	74	70	1983
11	75	70	1981
12	74	73	1886
20	74	73	1982
26	76	75	1888

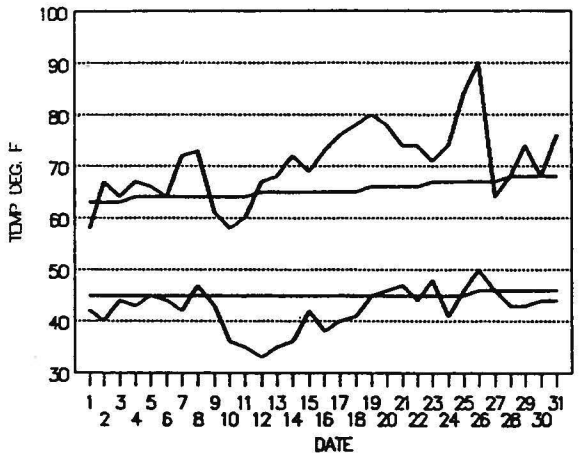
As high pressure weakened near the end of the month, a fairly deep upper-level low developed southwest of San Francisco. Southerly wind ahead of the low picked up a considerable amount of tropical moisture, setting the stage for much-welcomed rain throughout the state.

The rain first arrived in southern California the afternoon of the 27th in the form of locally heavy thunderstorms. As the thunderstorms crossed the mountains and moved up the Central Valley, they gathered strength as they approached Sacramento. Shortly after midnight of the 28th, a squall-line developed, causing brief but severe thunderstorms with very strong wind. Fairfield recorded a wind gust to 74 mph as the squall line passed. In Sacramento, wind speeds were generally 45-55 mph, with an unofficial report of 63 mph in the Orangevale area.

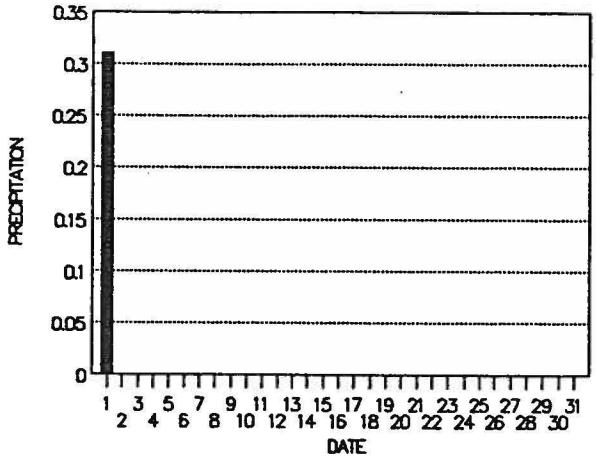
Thunderstorms developed again on the evening of the 28th. Although not nearly as severe as they were the day before, they were nevertheless quite spectacular. On the 29th, the low moved inland, bringing with it the first good snowfall to the Sierra Nevada in quite some time.

February had an average temperature of 54.8 degrees, or 2.6 degrees above normal. Rain for the month was 0.74 inches, well below the normal of 2.94 inches.

MARCH 1988
TEMPERATURES



MARCH 1988
PRECIPITATION



March was a very dry and windy month in Sacramento. Only one day (March 1) had measurable rain. In addition to the lack of rain, March had more than its share of dry--and at times destructive--north wind days.

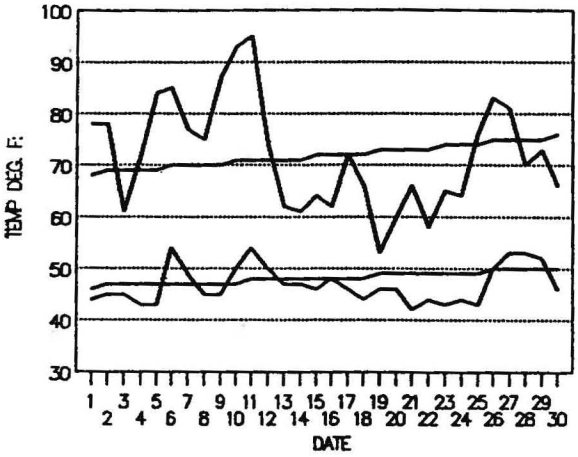
Highlights of the month were:

A record high temperature of 90 degrees occurred on the 26th. It not only was a record-high for the date, it also tied the record-high for the month and was the earliest date on record that a 90-degree or higher temperature occurred.

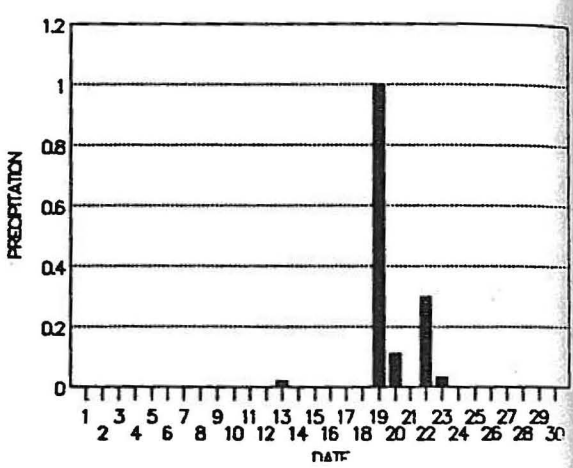
Remarkable cooling occurred the following day when the maximum temperature dropped to 64 degrees. The sharp cooling was accompanied by strong and gusty north winds that caused havoc throughout the area in the form of downed trees and fences. There was also a considerable amount of blowing dust. Travelers entering the Valley from the Sierra Nevada commented on how the blowing dust appeared like "a layer of Valley fog."

The average monthly temperature for March was 56.5 degrees, which was 1.2 degrees above normal. Only 0.31 inches of rain was measured for the month (all falling on the 1st), which was 1.87 inches below normal. The one-day rain tied the record for the least-number of days with measurable rain during March, previously occurring in 1898 and in 1926.

APRIL 1988
TEMPERATURES



APRIL 1988
PRECIPITATION



Warm and dry conditions continued through about the first two weeks of April. Major changes in weather patterns brought sharp cooling on the 13th, with below normal temperatures lasting through the 24th.

Light rain during the evening of the 13th brought an end to Sacramento's second, prolonged dry spell of the season. The rain was the first since March 1.

The major weather change came in the form of a storm from the Gulf of Alaska. Combined with considerable tropical moisture that had been streaming northward ahead of the system a few days before, the storm provided some relief to the drought-stricken area. On the 14th, an upper low formed west of Monterey. Bands of showers and thunderstorms, spinning northward around its center, brough heavy rain to parts of the Central Valley and the Sierra Nevada foothills. Over an inch and a half of rain (1.64 inches) fell at Castle Air Force Base near Merced. Similar amounts were reported in foothill communities along Highway 49.

Another storm from the Gulf of Alaska--this one much colder and more intense--swept through northern California on the 19th. The cold front passed through the Sacramento area around 3 p.m., accompanied by torrential rain and wind. A tornado occurred as the front moved through Folsom, causing considerable damage. Very cold and unstable air behind the front triggered numerous heavy thunderstorms, hail and a few funnel clouds on the 20th. Once again, rainfall totals, especially in the eastern portion of

Sacramento County, were impressive, ranging from two to four inches.

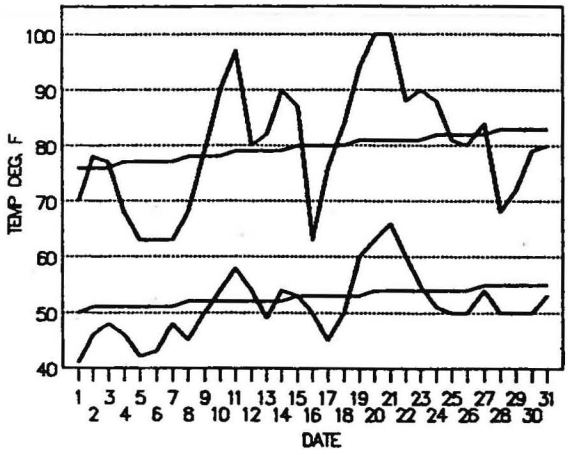
Daily maximum temperature records broken in April were:

Date	Max Temp.	Pre-vious	Date
10	93	92	1951
11	95	87	1908

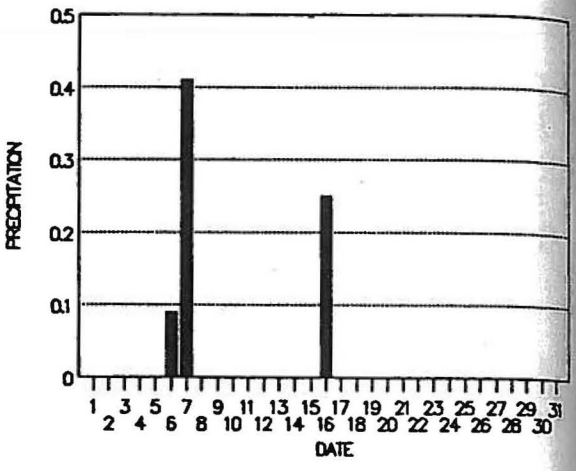
One the other end of the scale, the maximum temperature of 53 degrees on the 19th tied the record-low maximum temperature for the date. The previous record was set in 1880. The inch of rain that fell on the 19th set a record for that date, breaking the old record of 0.61 inches set in 1981.

April had a monthly temperature of 59.5 degrees, or 0.6 degrees below normal. Rain for the month was 1.46 inches, or 0.20 inches above normal.

MAY 1988
TEMPERATURES



MAY 1988
PRECIPITATION



Generally cool and cloudy weather prevailed during the first week of May as a series of weak storms from the Gulf of Alaska moved into northern California. Steady light rain from the evening of the 6th through mid-morning of the 7th accounted for a half-inch of rain in Sacramento.

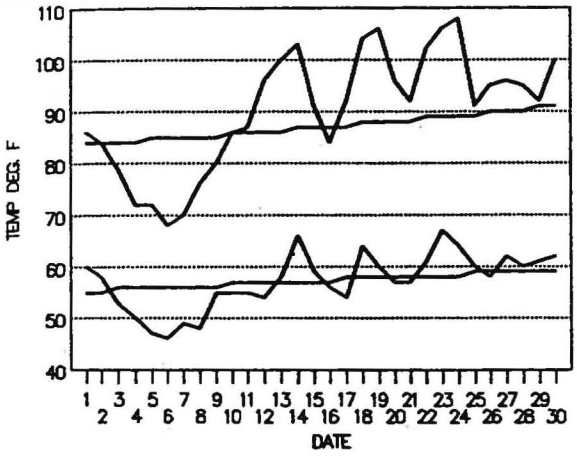
Pleasant late spring weather occurred the second and third week of May. The exception was on the 16th and 17th when a weak Pacific weather front brought rain and cooler conditions to the area. The first 100-degree temperature of the season took place during this period (the 20th and 21st)--the first of many that eventually would take place during the long and hot summer of 1988.

The remainder of the month was cool and windy as a series of storms from the Gulf of Alaska moved into the western United States. Highlight of this period was the Memorial Day weekend storm, with snow as low as 4000 feet in the Sierra Nevada.

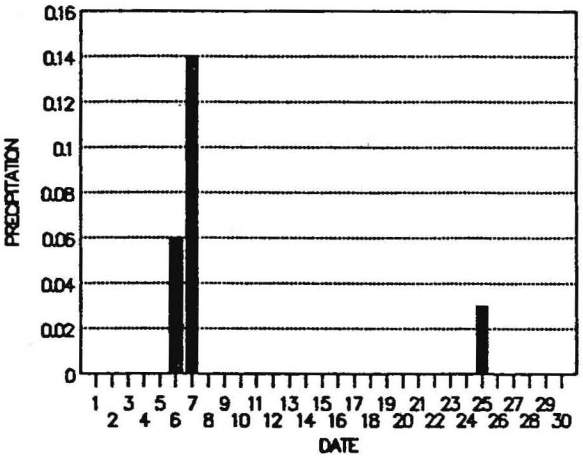
The high temperature of 100 degrees on the 21st was a record high for the date. The previous record was 99 degrees in 1967. A record-low temperature was broken on the 5th, with 42 degrees. The old record was 43 degrees in 1961.

May ended up with an average temperature of 65.7 degrees, or 0.6 degrees below normal. Rainfall for the month was 0.75 inches, or 0.40 inches above normal.

JUNE 1988
TEMPERATURES



JUNE 1988
PRECIPITATION



A series of storms from the Gulf of Alaska--a pattern that was established during the last week of May--brought unseasonably cool and wet weather to northern California the first week of June. Although no measurable rain was recorded in downtown Sacramento during this period, locations in the upper Sacramento Valley received over an inch of rain. Snow fell in the Sierra Nevada, with Blue Canyon picking up just over six inches.

For the rest of the month, summer-like weather returned with temperatures averaging well above normal. In Sacramento, maximum temperatures were over the century mark on five of seven days from the 18th through the 24th.

Record-high temperatures were set on the following dates:

Date	Max Temp.	Pre-vious	Date	Remarks
19	106	106	1945	Tied
23	106	105	1957	

Record-low temperatures were set on the following dates:

Date	Min Temp.	Pre-vious	Date	Remarks
5	47	47	1887	Tied
6	46	47	1887	

A summer rarity of sorts took place on the 25th when an early morning shower dropped 0.03 inches in the rain gage. This was a record 24-hour rainfall total for that date. In the past, only traces of rain had been observed on the 25th.

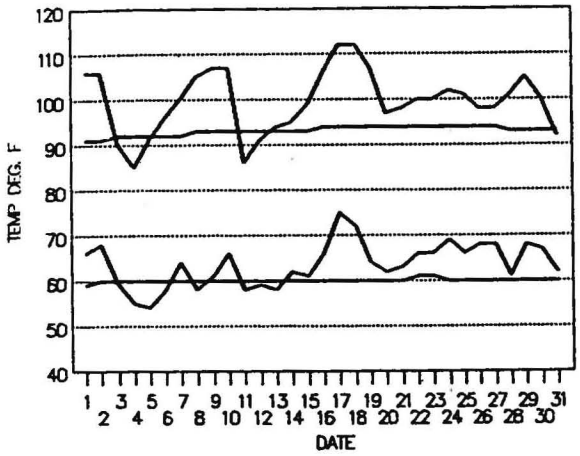
One final record worth mentioning: Six-and-a-half inches of snow fell at Blue Canyon on June 7. This was a record 24-hour snowfall for the month at that high Sierra location. A total of 7.2 inches fell for the month, which was the second greatest June snowfall on record. The most snow ever measured at Blue Canyon in the month of June was 8 inches in 1954.

The average monthly temperature in Sacramento was 73.8 degrees. This was 1.6 degrees above normal. Rainfall for the month was 0.23 inches, which was 0.10 above normal. The total rainfall for the Water Year 1987-88 was 15.37 inches, or 2.50 inches below normal.

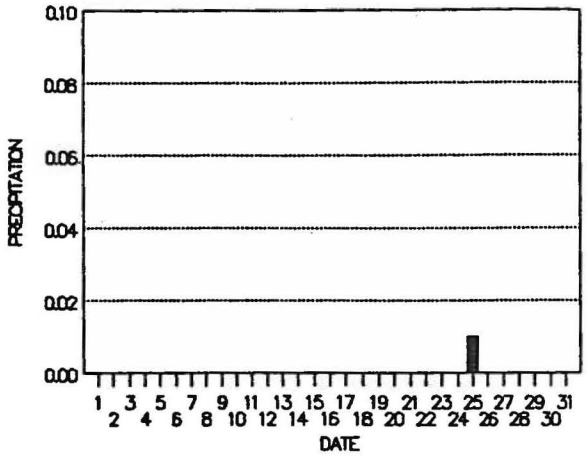
Water Year 1987-88 was the second consecutive season with below normal precipitation throughout northern and central California. The deficit during the 1987-88 season was especially staggering in the critical watersheds of the northern mountains and the Sierra Nevada. The following table shows precipitation totals with the seasonal normals for a few selected locations in northern and central California:

Location	Normal Pcpn. Jul 1-Jun 30	Pcpn. 1987-88	% of Normal
Sacramento City	17.87	15.37	86
Eureka	39.76	32.29	82
Redding	40.96	32.22	74
San Francisco	19.53	14.34	74
Blue Canyon	67.58	43.98	65
Mount Shasta City	37.49	23.04	62
Yosemite Valley	36.51	15.37	59
Santa Rosa	29.25	16.91	58

JULY 1988
TEMPERATURES



JULY 1988
PRECIPITATION



Simply stated, July 1988 was the hottest month EVER in Sacramento since temperature records began in 1877. A large high pressure area covering much of the western United States throughout the month was responsible for the extremely hot conditions.

Heat records tied or broken during the month were as follows:

The average temperature of 81.6 degrees not only was a record for the month, it also was the highest average monthly temperature on record. Previous records were 80.7 degrees in 1984.

The average maximum temperature was 99.6 degrees, breaking the old mark of 98.0 degrees in 1984.

The average minimum temperature was 63.5 degrees, barely surpassing the old record of 63.4 degrees in 1984.

The number of days with maximum temperatures of 90, 100 and 105 degrees or higher during the month was 29 days, 17 days, and 10 days, respectively--all records.

Record maximum temperatures were tied or broken on the following dates:

Date	Max Temp.	Pre-vious	Year	Remarks
10	107	107	1961	Tied
18	112	107	1961	
29	105	105	1943	Tied

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

Date	Hi Min.	Pre-vious	Year	Remarks
17	75	74	1935	
18	72	72	1925	Tied

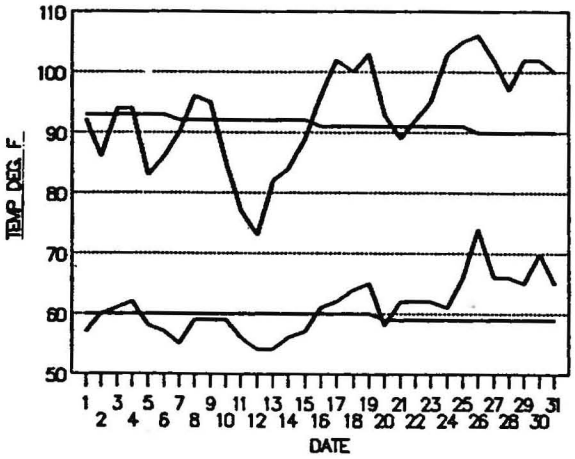
And, surprisingly, a brief rainshower on the evening of the 25th dropped 0.01 inches of rain, enough to set a record 24-hour rainfall amount for that date!

Many heat records were set throughout northern California in July. For example, Redding had an average maximum temperature of 103.4 degrees for the month, breaking the old record of 103.0 degrees set in 1984. The high temperature of 118 degrees on the 20th tied their all-time record-high temperature which was set August 7,1981. During the month, Redding had 16 consecutive days with maximum temperatures of 100 degrees or higher. There were also 15 days (eight consecutive) with maximum temperatures of 105 degrees or above, and eight days (six consecutive) with maximum temperatures of 110 degrees or higher. And we thought July was hot in Sacramento! Remarkably, even with the large number of days with triple-digit temperatures, July 1988 was only the third-hottest month on record.

July's heat was also felt at normally cool San Francisco. The high temperature of 103 degrees (105 degrees at the airport) on the 17th was the highest temperature on record, previously set on October 5, 1987, with 102 degrees. July 1988 went into the record book as the warmest July ever in San Francisco, with an average temperature of 64.2 degrees. The previous mark was 64.1 degrees in 1984. The warmest monthly temperature ever recorded in San Francisco was 69.4 degrees in September 1984.

AUGUST 1988

TEMPERATURES



Welcome relief from July's unusually hot weather occurred during the first two weeks of August. A series of cool upper-level troughs from the Gulf of Alaska, combined with a deep marine layer along the West Coast, was responsible for the rather pleasant cool-off. This period in August was, by far, the best weather of the summer season.

It was especially delightful from the 10th through the 15th, with afternoon high temperatures ranging from the low 70s to near 90 degrees--a far-cry from July's constant bombardment of triple digit temperatures.

Hot weather returned on the 16th and lasted through the end of the month, proving once again that good things, indeed, must come to an end.

August had an average monthly temperature of 77.2 degrees, or 1.6 degrees above normal. A few daily temperature records were set:

Date	High Max	Pre-vious	Date	Remarks
26	106	106	1894	Tied

Record-high minimum temperatures in August were set on these dates:

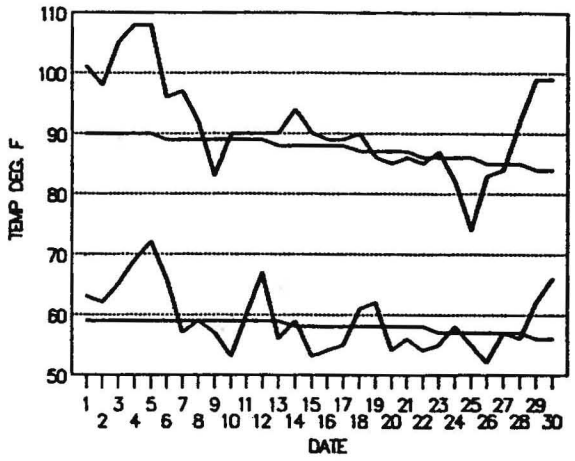
Date	High Min.	Pre-vious	Date	Remarks
26	74	74	1935	Tied
30	70	68	1977	

Record-low maximum temperatures in August were as follows:

Date	Low Max.	Pre-vious	Date	Remarks
12	73	74	1968	Great day!

SEPTEMBER 1988

TEMPERATURES



The late-August heat spell continued through the first week of September, with maximum temperatures ranging from seven to 18 degrees above normal. Sacramento had high temperatures of 100 degrees or higher on five of the seven days. Readings of 99 degrees on the 29th and 30th closed out the month.

From the 8th through the 28th, maximum temperatures were generally in the mid-80s to mid-90s.

Strong high pressure over the western United States was the dominant feature of the month. Weak Pacific weather fronts did manage, however, to cause delta breezes as they approached the state and created gusty north wind as their remnants moved eastward. Several of the north wind episodes caused the spread of wildfires in northern California with disasterous results.

The first large wildfire near Sacramento began the afternoon of the 11th in the dry grasslands west of the Nevada City/Grass Valley area. Fanned by the strong and gusty north wind, the fire caused considerable structural damage over 35,000-plus acres. Another fire began the night of the 17th near Lake Berryessa and quickly spread south toward Vacaville. Again, considerable structural damage occurred as it blackened 35,000 acres.

About the same time as the wildfires were raging in northern California, Hurricane Gilbert was moving westward steadily from the Caribbean Sea to the Gulf of Mexico. After striking a devastating blow to Jamaica on the 12th, Gilbert headed for the Cayman Islands. Just before reaching the Islands, the central atmospheric pressure dropped to 26.13 inches (885.0 millibars)--the lowest sea level pressure ever recorded in the Western Hemisphere. After much damage to the Caymans and the northern tip of the Yucatan Peninsula, Gilbert made landfall on the 16th about 80 miles south of Brownsville, Texas. Much weaker than it was three days prior to landfall, most of Gilbert's damage to the mainland of the United States was in the form of tornados and heavy rain.

Daily maximum temperature records broken during September in Sacramento were as follows:

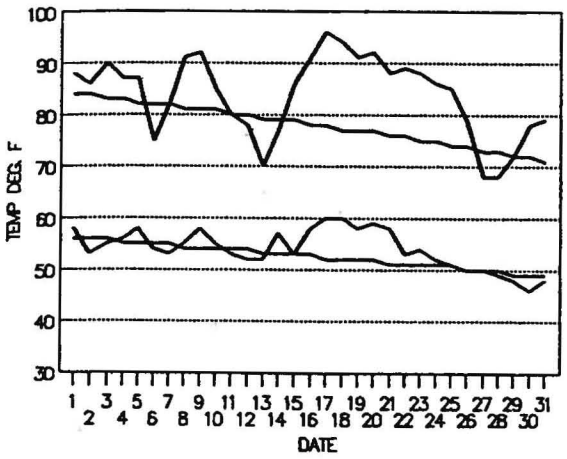
Date	High Max.	Pre-vious	Year	Remarks
4	108	107	1955	
5	108	104	1975	

Daily high minimum temperatures were also broken on the following dates:

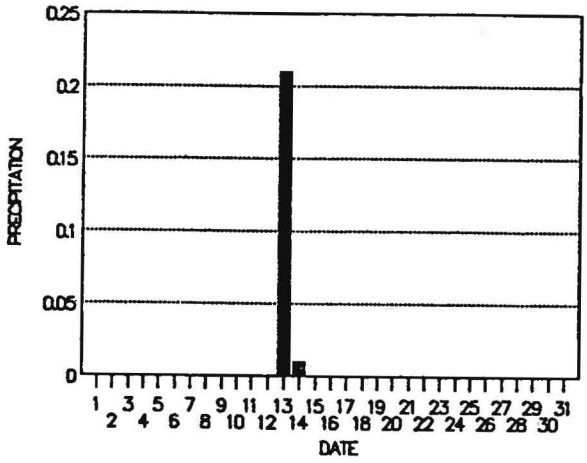
Date	High Min.	Pre-vious	Year	Remarks
5	72	68	1923	
30	66	65	1976	

September had an average monthly temperature of 75.3 degrees. This was 2.4 degrees above normal.

OCTOBER 1988
TEMPERATURES



OCTOBER 1988
PRECIPITATION



Boosted by record-breaking temperatures from the 17th through the 22nd, October had an average temperature of 69.0 degrees and went into the book as the fourth-warmest. The average maximum temperature for the month was 83.8 degrees, just shy of the record of 83.9 degrees.

The first rain of the winter season occurred on the 13th. Downtown Sacramento received 0.21 inches, marking the first day of measurable rain in the River City since July 25.

Elsewhere in northern California, Blue Canyon registered its warmest October on record with an average monthly temperature of 63.1 degrees. This was 8.9 degrees above normal. It also was the third-driest October on record, with only 0.04 inches of precipitation measured.

Daily maximum temperatures were tied or broken on the following dates:

Date	High Max.	Pre-vious	Date	Remarks
17	94	92	1974	
18	94	91	1974	
19	91	90	1928	
20	92	89	1927	
22	89	89	1964	Tied

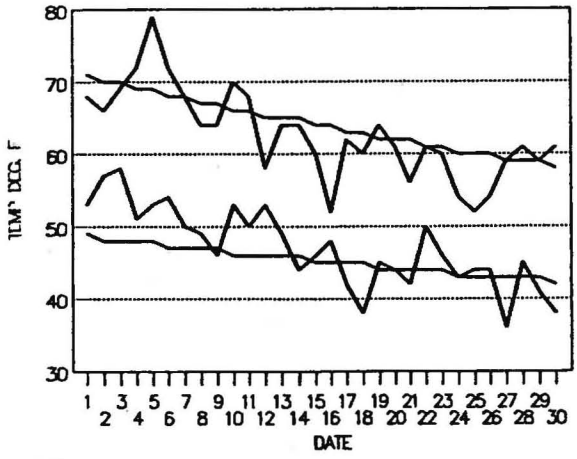
Record-high minimum temperatures were tied or broken on the following dates:

Date	High Min.	Pre-vious	Date	Remarks
18	60	59	1979	
19	58	58	1979	Tied

There were two days with measurable rain in Downtown Sacramento totaling 0.22 inches. The average rainfall for October is 0.90 inches.

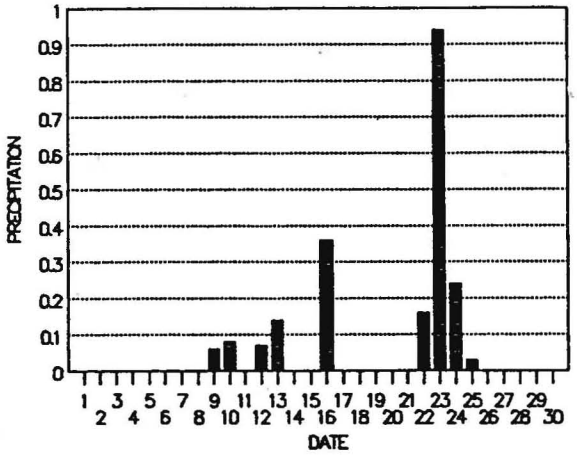
NOVEMBER 1988

TEMPERATURES



NOVEMBER 1988

PRECIPITATION



A series of Pacific storms brought much-welcomed rain and snow to northern California in November. Areas along the North Coast, northern Sacramento Valley and the Sierra Nevada in particular were the primary recipients of the November storms. Monthly precipitation totals at these areas were twice the normal at a number of locations. Many ski resorts in the Sierra Nevada enjoyed their earliest season-opener in many years, thanks to heavy snowfall during the middle and late portions of the month.

Two especially stormy periods stood out during the month: November 9-17, and November 22-26. Both periods encompassed at least part of holiday weekends--Veterans Day and Thanksgiving Day.

Storms from the 9th through the 17th brought the first good snow of the season to the Sierra Nevada, with 10 inches of snow at Truckee, and 8 inches at Blue Canyon from the afternoon of the 12th through early morning of the 13th. One to three feet of snow was reported at the higher elevations surrounding the ski resorts. In the foothills, heavy rain fell throughout the period, with hail up to three inches deep at Pollock Pines the night of the 16th. In Sacramento, only light amounts of rainfall (0.91 inches) occurred throughout the period.

Storms of November 22-26 brought another shot of heavy rain and snow to the Sierra Nevada. Rainfall amounts in the foothills on the 22nd and 23rd ranged from two to seven inches. Blue Canyon recorded 13 inches of snow in a 24-hour period ending on the

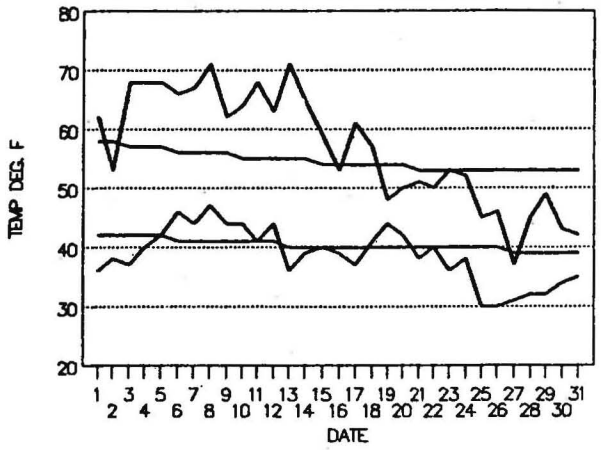
afternoon of the 24th, and at Truckee, 9 inches of snow fell. Higher elevations once again reported one to three feet of snow. Sacramento's first significant rain of the season occurred on the 23rd when 0.94 inches was recorded.

While Sacramento's precipitation total for November was not all that impressive (2.08 inches vs. 2.31 inches normal), other locations in northern California did quite well. The following table will give an indication of just how heavy precipitation totals were as compared to Sacramento.

	Nov. Pcpn	Nov. Avg	% of Avg
Blue Canyon	17.33	8.41	206%
Nevada City	16.85	-	-
Colfax	12.37	-	-
Redding	10.11	5.76	174%
Pacific House	9.84	-	-
Sacramento	2.08	2.31	90%

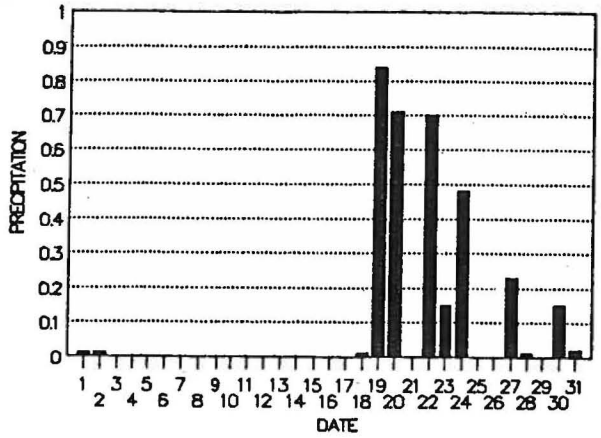
DECEMBER 1988

TEMPERATURES



DECEMBER 1988

PRECIPITATION



December's warm and dry weather during the first half of the month caused more than some concern of a third-consecutive drought year. The water supply outlook took a turn for the better during the second half of December as a series of cold and blustery storms from the Gulf of Alaska moved through California.

Strong high pressure over the far west was responsible for the dry period, deflecting incoming Pacific storms well to the north of California. On the 14th and 15th, the high moved just west of British Columbia, allowing a cold and deep upper-level low to develop offshore of Santa Barbara. The combination of the high and low pressure areas caused two significant weather developments to occur in California with far-reaching results: Very strong north and northeasterly wind over northern and central California and snow in southern California.

A large barometric pressure difference between the high and the low was the cause of the windstorms in northern and central California on the 15th. Particularly hard-hit were the foothills of the Sierra Nevada, the high Sierra, the west side of the Sacramento Valley and the San Francisco Bay Area. Wind gusts on top of Mount Tamalpais and Mount Diablo were reported at 100 MPH. High winds in the Sierra foothills caused widespread power outages. In the lowlands, the highest wind speed was registered at Travis Air Force Base, near Fairfield, with 67 MPH.

As heavy winds raked the north part of the state, heavy snow was falling in southern California. Interstate 5 over the Grapevine and Interstate 15 over Cajon pass were both closed due

to snow and wind. Heavy, wet snow fell in San Luis Opispo county, with six inches at Santa Margerita, and four inches at Paso Robles and Atascadero.

A series of cold storms from the Gulf of Alaska moved into California from the 18th through the end of the month, bringing heavy snow periodically to the Sierra Nevada. Snow fell at very low elevations in northern California during this period. On the 24th, Redding reported a snow depth of eight inches, while Red Bluff had two inches. A surprise storm brought a light dusting of snow to the Sacramento area the early morning of the 27th. Areas to the north and west of Sacramento had a little more than a dusting, however, as both Woodland and Davis estimated about one to two inches of snow on the ground.

Several daily temperature records were set in Sacramento in December. They were:

Date	High Max.	Prev. Record	Date	Remarks
8	71	71	1943	Tied
13	71	68	1929	

A record-low maximum was established on December 27, as the maximum temperature only reached 37 degrees. The previous record for this date was 38 degrees in 1985.

December's average temperature was 47.7 degrees, or 0.2 degrees above normal. There were 12 days with measurable rain, accounting for 3.32 inches. This was 0.32 inches above normal. The July 1-December 31 precipitation total in Sacramento was 5.63 inches, compared to a normal of 6.65 inches.

V. TEMPERATURE RECORDS

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - JANUARY 1988

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	1988*	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 1988

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	70	1988	43	1901	55	1975	27	1883
9	70	1988	45	1939	53	1941*	28	1891*
10	74	1988	44	1939	55	1941	29	1933*
11	75	1988	44	1894*	54	1970	30	1884
12	74	1988	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	74	1988	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	76	1988	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 1988

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	1988*	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	84	1988	48	1907	60	1896	34	1936
26	90	1988	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	1988*	45	1976	60	1914*	29	1880

*Also occurred on earlier dates or years.

Temperature:

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES
1878 - APRIL 1988

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	93	1988	52	1912	60	1885	34	1927
11	95	1988	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	1988*	64	1907	39	1933
20	92	1931	49	1963	60	1907	38	1904
21	96	1931	54	1967	62	1931*	36	1963*
22	92	1984	54	1980	60	1895	39	1920
23	92	1946	54	1924	62	1910	39	1920
24	94	1946	57	1951*	59	1945	38	1964
25	92	1987	54	1952	61	1966	40	1891
26	94	1987	54	1911	63	1926	39	1892
27	96	1987	56	1904*	62	1965*	38	1955
28	94	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 1988

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	42	1988
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	100	1988	61	1933	69	1892	45	1960*
22	100	1967	60	1977	70	1943	42	1960
23	98	1936	57	1960	69	1943	45	1916
24	98	1982*	58	1916	72	1890	43	1953
25	100	1951	58	1917	68	1883	43	1899
26	102	1974	63	1906	69	1951*	42	1918
27	104	1984	56	1906	67	1984	45	1927
28	107	1984	60	1971*	72	1887	44	1927
29	101	1973	63	1911	71	1973	44	1985
30	103	1910	61	1932	68	1969	44	1898
31	100	1910	58	1899	67	1910*	45	1923
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 1988

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	1988*
6	105	1978	57	1914	73	1974	46	1988
7	102	1883	64	1927	73	1903	44	1950
8	103	1973	57	1964	71	1973	46	1892
9	102	1986*	59	1964	74	1883	46	1892
10	105	1918	67	1955	72	1921	46	1917
11	107	1985*	64	1907	72	1985	48	1901
12	105	1985	62	1884	68	1960	44	1952
13	107	1985	60	1907	67	1966	48	1952*
14	109	1961	65	1944	75	1966	47	1907
15	111	1961	62	1944	71	1961	47	1944
16	108	1985	68	1929*	73	1985	47	1919
17	102	1976	66	1909	68	1922	48	1910
18	105	1945*	68	1909	70	1981*	48	1891
19	106	1988*	65	1930	76	1917	50	1908
20	108	1920	63	1908	74	1981	46	1910
21	108	1961	68	1907	74	1981	46	1908
22	107	1981	65	1923	74	1981	48	1943
23	106	1988	59	1912	78	1909	50	1930
24	110	1925	64	1899	74	1976	49	1918
25	111	1925	68	1906	74	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 1988

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	1988*	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	75	1988	48	1887
18	112	1988	69	1932	72	1988*	50	1921
19	109	1936	72	1907	71	1961	49	1887
20	107	1933	74	1985*	75	1917	50	1887
21	106	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	1988*	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 1988

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	73	1988	73	1898	50	1910
13	111	1933	73	1968*	70	1983*	48	1921
14	107	1920	70	1976	73	1933*	49	1887
15	108	1920	72	1918	74	1983*	51	1955
16	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	1988*	73	1975	74	1988*	50	1929
27	108	1894	75	1975	73	1894	51	1952*
28	105	1915	67	1895	74	1913	50	1910
29	108	1987	69	1895	71	1977	49	1880
30	110	1987	70	1914	70	1988	48	1887
31	108	1976	66	1964	68	1972	51	1914*
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 1988

MONTH: September

Date	High Max.	Year	Low Max.	Year	High Min.	Year	Low Min.	Year
1	109	1950	69	1898	67	1976	48	1899
2	109	1955	70	1913	72	1950	49	1898
3	108	1955	68	1912	71	1950	50	1895
4	108	1988	67	1900	72	1950	47	1914
5	108	1988	70	1912	72	1988	50	1920
6	105	1923	62	1912	72	1923	49	1900
7	107	1923	67	1920	72	1969	50	1935*
8	107	1944	64	1920	73	1944	47	1914
9	108	1944	64	1978	73	1944	45	1898
10	105	1888	67	1952	67	1953*	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*	66	1988	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 1988

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	96	1988	60	1892	61	1974	38	1984*
18	94	1988	59	1984	60	1988	39	1905
19	91	1988	55	1908	58	1988*	43	1949*
20	92	1988	58	1961*	62	1940	37	1949*
21	90	1929	60	1931*	60	1982*	38	1886
22	89	1988*	56	1897	62	1982	40	1914
23	90	1965	56	1897	62	1982	40	1885
24	91	1959	57	1962	60	1959	37	1956
25	89	1965	57	1919	61	1917	40	1900
26	88	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 1988

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	1988*	36	1936
3	85	1976	52	1935	58	1988*	35	1935
4	84	1980	52	1918	58	1941	30	1935
5	85	1976	52	1973	59	1891	34	1935
6	84	1976	53	1922	56	1913	35	1920
7	83	1931	53	1920	58	1973	36	1897
8	82	1955	53	1942*	58	1970*	34	1897
9	83	1976*	50	1982	57	1976*	36	1920
10	80	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 1988

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	1988*	38	1972	55	1950	27	1972
9	69	1893	37	1972	58	1939	23	1932
10	68	1958	35	1932	57	1937	22	1932
11	71	1958	34	1932	54	1937	17	1932
12	71	1958	38	1972	56	1969*	21	1932
13	71	1988	42	1961	56	1929	23	1932
14	69	1958	32	1972	56	1981	23	1940
15	72	1958	36	1972	56	1929	26	1932
16	70	1958	40	1890	54	1962	26	1892
17	69	1958	40	1890	52	1877	28	1928
18	68	1958	40	1963	52	1884	28	1924
19	66	1929	37	1908	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	37	1988	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 1988

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	26	1988*	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 1988

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 1988)

Month	#Normal Monthly Maximum	Highest Average Maximum	Year	Lowest Average Maximum	Year
January	53.9	62.1	1976	45.9	1937
February	60.6	67.6	1988	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	99.6	1988	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	99.6	July 1988	45.9	Jan. 1937

HIGHEST AND LOWEST AVERAGE MINIMUM TEMPERATURE BY MONTHS WITH YEAR OF OCCURRENCE. (July 1877-December 1988)

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	63.5	1988	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 1988)

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 1988)

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	81.6	1988	69.4	1903
	80.7	1984	70.2	1887
Normal	79.5	1931	70.7	1907
76.6	78.9	1985	71.0	1914
	78.7	1967	71.2	1904
	78.6	1918,1976	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 1988)

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	69.0	1988	58.6	1920
65.3	68.5	1958,1965	58.8	1882,1886
	68.4	1933,1974	59.0	1883
	68.0	1917,1978	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
(1878-1988)

Highest Annual Average			Lowest Annual Average	
Temp.	Year		Temp.	Year
65.1	1976		58.1	1880
64.7	1981	Average Annual	58.4	1911
63.8	1967,1984	Temperature 62.2	58.8	1893
63.7	1986		59.2	1902
63.6	1974,1983,1988		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
(1878-1988)

90° or Higher (1)		100° or Higher (2)		105° or Higher (3)	
Days	Year	Days	Year	Days	Year
110	1984	41	1988	18	1988
104	1988	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	80 days
100 Degrees or higher	19 days
105 Degrees or higher	4 days

(1) Only years with 80 or more days tabulated.
(2) Only years with 20 or more days tabulated.
(3) Only years with 5 or more days tabulated.

Temperature:

GREATEST NUMBER OF CONSECUTIVE DAYS WITH
MAXIMUM TEMPERATURES
90 DEGREES OR HIGHER
(July 1877-September 1988)

Days	Period	Year	Days	Period	Year
35	Jul 24-Aug 27	1967	18	Aug 22-Sep 8	1988
29	Jun 22-Jul 20	1984	18	Jun 23-Jul 10	1985
25	Jul 17-Aug 10	1974	18	Jul 19-Aug 5	1945
24	Jul 25-Aug 17	1969	18	Jun 19-Jul 6	1929
23	Jul 26-Aug 17	1983	17	Jul 17-Jul 3	1988
22	Jun 15-Jul 6	1981	17	Jul 29-Aug 14	1986
22	Jul 7-Jul 28	1961	17	Jul 26-Aug 11	1978
21	Jul 12-Aug 1	1988	17	Jul 1-Jul 17	1953
21	Jul 29-Aug 18	1971	17	Jul 9-Jul 25	1917
21	Jul 29-Aug 18	1920	16	Jul 19-Aug 3	1980
20	Jul 15-Aug 3	1959	16	Jul 28-Aug 12	1955
20	Sep 8-Sep 27	1899	16	Jul 12-Jul 27	1891
19	Aug 27-Sep 14	1948	16	Jun 29-Jul 14	1882

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	27	Aug 1931
29	Jul 1988	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

Only months with 25 or more days tabulated.

Temperature:

GREATEST NUMBER OF CONSECUTIVE DAYS WITH MAXIMUM TEMPERATURES 100 DEGREES OR HIGHER (July 1877-September 1988)

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
17	Jul 1988	12	Aug 1966
16	Jul 1984	11	Jul 1980
16	Jul 1931	11	Jul 1979
14	Aug 1969	11	Jul 1933
13	Jul 1985	10	Aug 1988
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 1988)

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

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
10	Jul 1988	5	Aug 1923
7	Jul 1984	5	Aug 1920
7	Jul 1931	4	Aug 1978
6	Jun 1985	4	Jul 1972
6	Jun 1961	4	Jul 1960
6	Jul 1985	4	Sep 1950
5	Aug 1987	4	Jul 1935
5	Aug 1966	4	Aug 1913
5	Jul 1961	4	Aug 1898
5	Jul 1933		

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 1959-October 1988)

Month	90° or above	100° or above	105° or above
April	1	0	0
May	7	1	*
June	13	4	1
July	22	7	2
August	20	5	1
September	13	2	*
October	3	*	0
Annual Average	80 Days	19 Days	4 Days

* Less than one day

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

The urban Heat Island has also caused a decrease in the frequency of minimum temperatures 32 degrees or lower. This fact is readily apparent on the following page. Note that most record minimum temperatures on this page are quite old--only 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 26, 1988
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 17, 1984

Temperature:

GREATEST NUMBER OF CONSECUTIVE DAYS WITH MINIMUM TEMPERATURES 32 DEGREES OR LOWER (December 1877-December 1988)

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 1988)

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 1988)

	Maximum Monthly Precipitation		Minimum Monthly Precipitation	
Month	Amount	Year	Amount	Year
Jan.	15.04	1862	0.15	1889
	12.72	1911	0.23	1984
Normal	9.76	1896	0.29	1920
4.18	9.65	1909	0.37	1976
	9.61	1978	0.45	1904
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 1988)

	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	1988
	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	1988
	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 1988

Date	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	1.00	1988
20	2.10	1964	1.21	1914	0.97	1910	5.28	1880
21	3.14	1943	1.26	1917	2.52	1937	3.09	1880
22	1.61	1878	1.04	1891	1.08	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 1988

Date	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	0.25	1988	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	0.03	1988	0.01	1988	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 1988

	SEP		OCT		NOV		DEC	
Date	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 1988.
Average Days of 0.50 inch from January 1951-December 1988.

Precipitation:

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.01 INCH OR MORE
(Periods with 12 or more days tabulated)
(1878-1988)

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)
(1878-1988)

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)
(1878-1988)

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)
(1878-1988)

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 1988)

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 1988)

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 1988)

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-
41	Dec 18, 1962-		Jan 7, 1957
	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 1988)

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 1988)

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 1988)

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
Annual	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 57-59.

Precipitation:

TABULATED RAINFALL DATA
*EXCESSIVE STORMS 1903-1988

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	3.61	0.74	0.31	1.46	0.75	0.23	15.37
1988-89	0.01	0.00	0.00	0.22	2.08	3.32	5.63							

*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 1988)

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 1988)

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 1988)

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 1988)

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	12	2	1	5	3	3	55	15.37
1988-89	1	0	0	2	9	12								

* 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 1988)

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 1988)

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 1988)

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
			1988	Dec 27,28	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.

Precipitation:

GREATEST SNOWFALL DURING ANY 24 HOUR PERIOD
(January 1878-December 1988)

Month	Amount	Date	Year
Jan.	3.5	04,05	1888
Feb.	2.0	05	1976
Mar.	2.0	14	1942
Apr.	T	18,26	1955*
May	0		
Jun.	0		
Jul.	0		
Aug.	0		
Sep.	0		
Oct.	0		
Nov.	0		
Dec.	T	06,12	1972*
Annual	4.0	04,05,16	Jan. 1888

* Also occurred on earlier years

AVERAGE AND GREATEST NUMBER OF DAYS WITH THUNDERSTORMS
BY MONTH WITH YEAR OF OCCURRENCE
(January 1881-December 1988)

Month	Average Number Thunderstorms	Greatest Number Thunderstorms	Year
Jan.	0.4	3	1970*
Feb.	0.5	3	1980*
Mar.	0.8	4	1983
Apr.	0.8	4	1941*
May	0.4	3	1956
Jun.	0.2	2	1952*
Jul.	0.2	2	1984
Aug.	0.1	2	1962*
Sep.	0.5	5	1904
Oct.	0.3	3	1945*
Nov.	0.3	3	1970*
Dec	0.2	3	1945
Annual	4.6	11	1904

City office data used from January 1881-January 1950. Executive Airport data used thereafter. The average number of thunderstorm days is based on Executive Airport data from 1938-1987.

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	71	86
Feb	88	79	61	82
Mar	85	69	53	77
Apr	81	58	43	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 (1960-1987).

Pressure:

AVERAGE SEA-LEVEL PRESSURE WITH THE HIGHEST AND LOWEST BY MONTH WITH DATE AND YEAR OF OCCURRENCE (July 1877-December 1988)

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 1948-1987)

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	45%	7.1	6.3	5.8	18.9	10.2	23	1961
Feb	63%	6.3	7.7	6.9	13.6	5.3	13	1963*
Mar	72%	5.6	10.3	8.2	12.5	1.6	4	1979*
Apr	81%	4.6	12.6	9.3	8.1	0.4	2	1965*
May	89%	3.5	17.6	8.3	5.1	0.2	2	1971
Jun	93%	2.2	21.7	5.8	2.5	0.0	0	----
Jul	97%	1.2	26.9	3.2	1.0	0.0	0	----
Aug	96%	1.5	25.5	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	19.1	6.1	5.7	1.5	11	1962
Nov	64%	5.8	9.7	6.9	13.3	5.6	11	1982
Dec	46%	6.8	7.6	5.6	17.8	9.4	21	1985*
Annual	77%	4.1	188.4	74.6	102.2	34.5	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 1988)

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 1988)

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 1988)

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 1988)

Month	Normal	Highest	Year	Lowest	Year
Jul	0	7	1974	0	Most
Aug	0	4	1964	0	Most
Sep	7	53	1986	0	1988*
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 1988)

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	484	1988	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	885.0/26.13	Hurricane "Gilbert," near Cayman Island, September 13, 1988
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			Date	February Temperature			Date	March Temperature			Date	April Temperature			Date	May Temperature			Date	June Temperature		
	Max	Min	Avg		Max	Min	Avg		Max	Min	Avg		Max	Min	Avg		Max	Min	Avg		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 Max	Min	Avg	Date	August Temperature Max	Min	Avg	Date	September Temperature Max	Min	Avg	Date	October Temperature Max	Min	Avg	Date	November Temperature Max	Min	Avg	Date	December Temperature 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

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	67.6	1988	36.4	1880	80	27	1985	21	13	1884
Mar	65.4	45.2	55.3	73.2	1934	38.9	1880	90	26	1988*	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	99.6	1988	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	99.6	Jul 1988	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	1988*	3.14	11,12	1918	0				
Oct	0.90	6.85	1962	0.00	1988*	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 date 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	71	86	7.3	SE	60	SE	17	1954
Feb	412	0	88	79	61	82	7.7	SSE	58	SE	9	1938
Mar	366	0	85	69	53	77	8.7	SW	66	S	14	1952
Apr	229	25	81	58	43	73	8.8	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	7.6	SW	42	NW	16	1965
Oct	82	48	80	57	39	70	6.5	SW	68	SE	26	1950
Nov	360	0	86	75	59	81	6.1	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 (1960-1987).

(+) 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	45	7.1	6	6	19	10	7	3	1	0.4	10.2	0	0	0	3.0
Feb	63	6.3	8	7	14	9	5	2	1	0.5	5.3	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	3	1	1	0	0	0.2	0.0	13	4	1	0
Jul	97	1.2	27	3	1	0	0	0	0	0.2	0.0	22	7	2	0
Aug	96	1.5	26	4	1	0	0	0	0	0.1	0.1	20	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	64	5.8	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	9.4	0	0	0	3.0
Year	77%	4.1	188	75	102	57	36	12	3	4.5	34.5	80	19	4	6.0

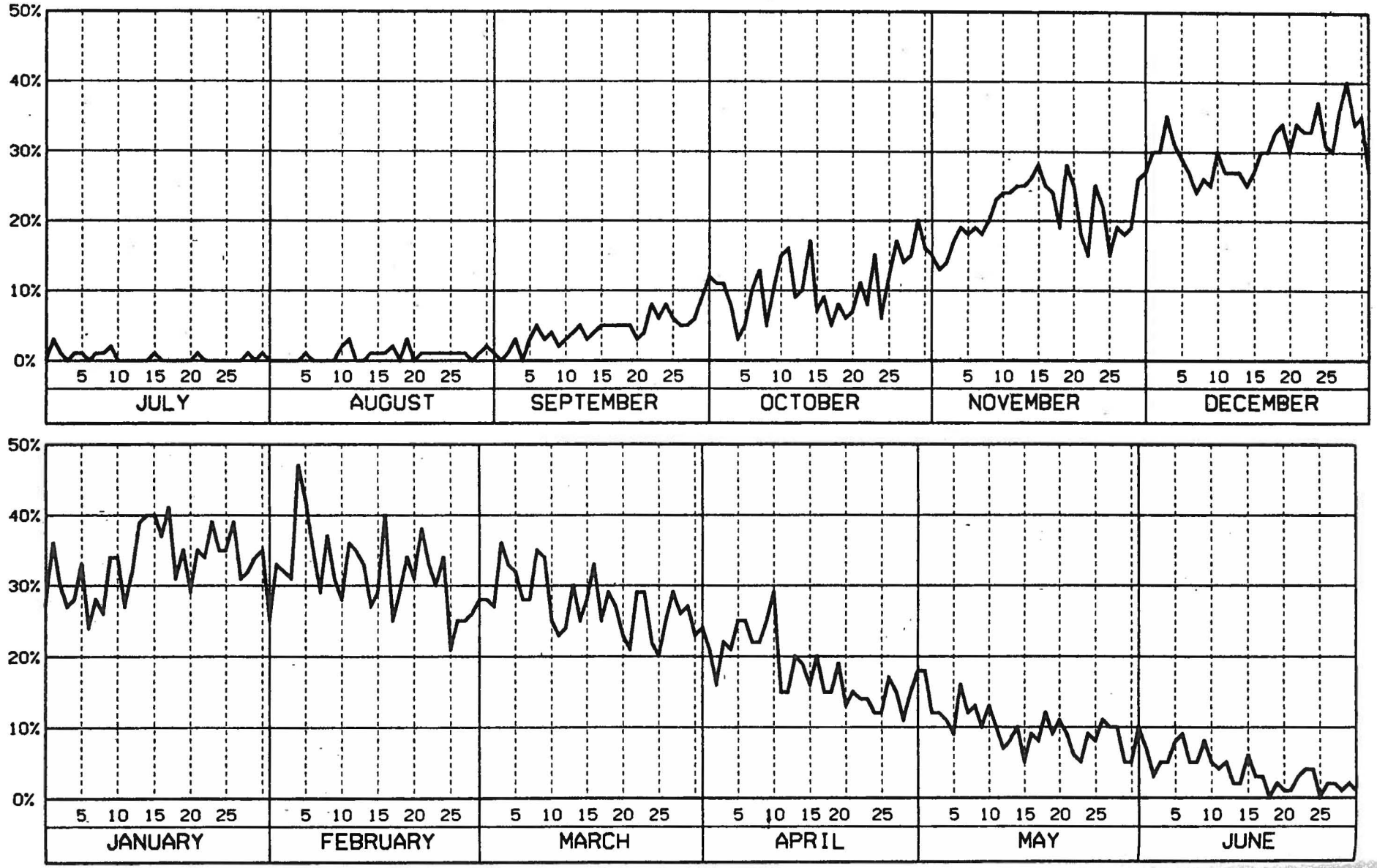
Sacramento Executive airport (1948-1986).

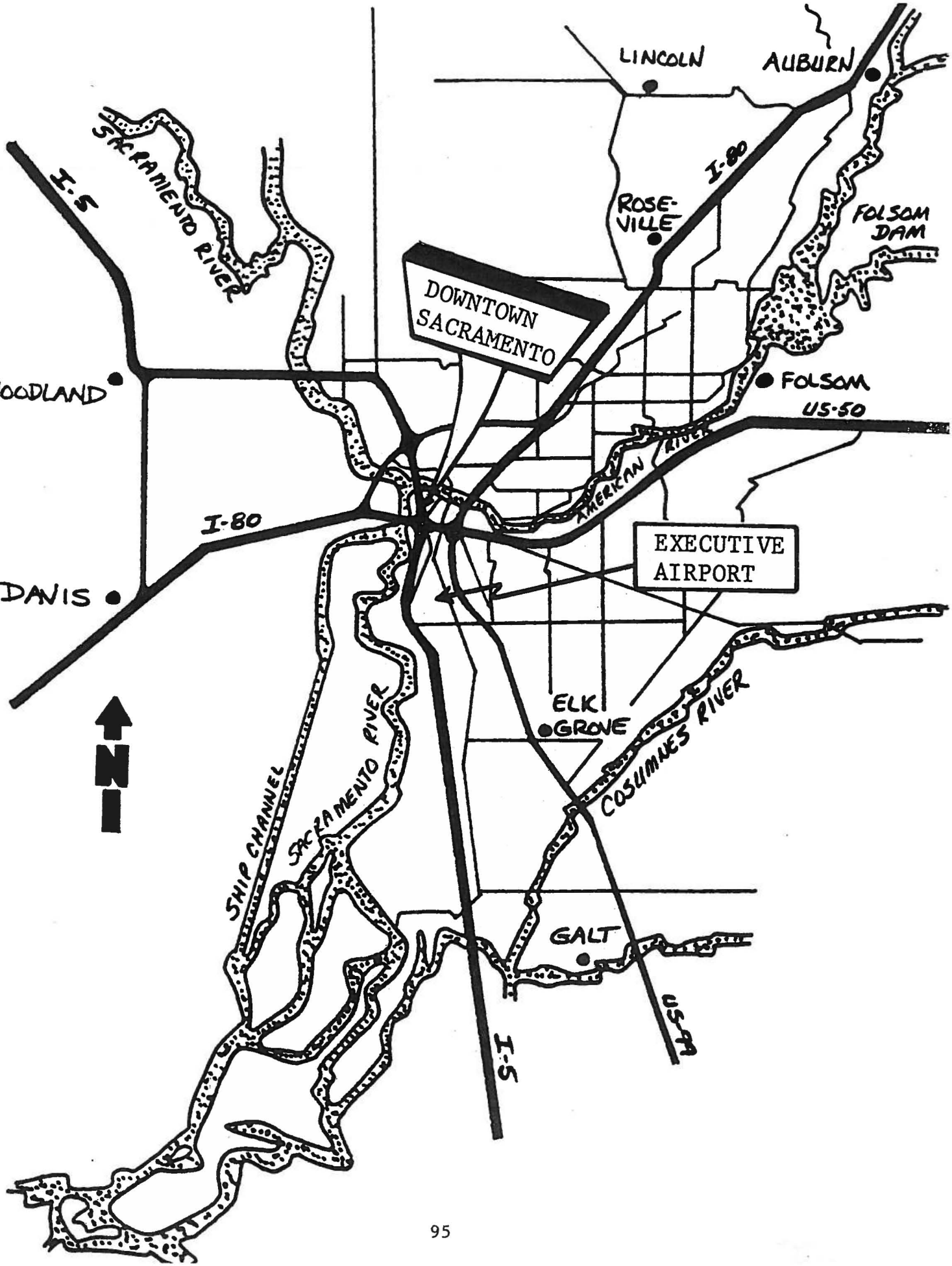
Precipitation and temperature averages are for Downtown Sacramento.
0.01-inch amounts are from July 1877-present.
Other catagories are from January 1951-present.
Temperature means are from 1958-present.

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
EXECUTIVE AIRPORT
DAVIS
N
ELK GROVE
COSUMNES RIVER
SHIP CHANNEL
SACRAMENTO RIVER
GALT
US-99
I-5

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.