



NOAA Technical Memorandum NWS WR-272

CLIMATE OF SACRAMENTO, CALIFORNIA

Revised by:
Laura A. Bevan
George Cline

Revised June 2005

*UNITED STATES
DEPARTMENT OF COMMERCE
Donald Evans, Secretary*

*National Oceanic and National Weather Service
Atmospheric Administration David L. Johnson, Assistant
Conrad C. Lautenbacher Administrator for Weather Services
Under Secretary and Administrator*

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

**Delain A. Edman, Chief
Scientific Services Division
Salt Lake City, Utah**

**CLIMATE OF
SACRAMENTO, CALIFORNIA**

**Laura A. Bevan
George Cline
National Weather Service Office
Sacramento, California**

Revised June 2005

TABLE OF CONTENTS

I.	NARRATIVE CLIMATOLOGICAL SUMMARY	1-4
II.	NORMALS	5-18
III.	DAILY RECORDS	19-31
IV	TEMPERATURES	32-46
	High & Low Avg Max/Min	33
	Extreme Averages	
	1. Monthly	34-35
	2. Seasonal	36-37
	3. Annual	38
	Number of Days	
	4. 90 Degrees or Higher	39
	5. 100 Degrees or Higher	40
	6. 105 Degrees or Higher	41
	7. 90, 100 & 105 Degrees or Higher	42-43
	Freeze Data	
	8. 32 Degrees or Lower	44-45
	9. Freeze-Free Periods	46
V	PRECIPITATION	47-71
	Tables	
	10. Monthly Extremes	48-49
	11. Season Totals	50-55
	12. Number of Days with Measurable rain by Month	56-60
	13. Excessive Storm Totals	61-62
	Number of Days	
	14. Averages and Extremes by Month	63-64
	15. 0.25 & 0.50 Inch or More	64-65
	16. 0.50 & 1.00 Inch or More	65
	17. (Non) / Measurable Months	66-67

Other Records

18. Wettest/Driest Years	68
--------------------------	----

Snowfall Data

19. Occurrences and Accumulation	69
20. Greatest in 24 Hour Period	70

VI. MISCELLANEOUS WEATHER RECORDS 71-82

21. Thunderstorm Days	72
22. Relative Humidity	72
23. Sea Level Pressure	73
24. Sunshine, Cloudiness, & Fog	74
25. Dense Fog	75
26. Wind Speed	76
27. Heating Degree Days	77
28. Cooling Degree Days	78
29. Comparative Extremes	79-82

I. CLIMATE OF SACRAMENTO

CLIMATOLOGICAL SUMMARY

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

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

Summer nights in the Southern Sacramento Valley are usually pleasant. This is primarily the result of the refreshing breezes blowing up from the San Francisco Bay through the Delta. The exception is when the north or northeasterly wind develops during heat waves.

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

Sacramento is the geographical hub of the great Central Valley of California, which is the most productive agricultural region in the United States. This region produces cotton, poultry, livestock and dairy products, plus a wide variety of fruits, cereals, vegetables and nuts, ranging from the semi-tropical to the hardier varieties.

A HISTORY OF WEATHER OBSERVATIONS AT SACRAMENTO

The first organized weather observations for Sacramento were started by the Smithsonian Institution in 1849. The first government 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:

- 1. 4th and J Streets (St. George Building), July 1, 1877 to November 27, 1879.**
- 2. 2nd and K Streets (Fratts Building), November 28, 1879 to May 31, 1882.**
- 3. 1006 2nd Street (Arcade Building), June 1, 1882 to January 31, 1884.**
- 4. 117 J Street (Lyon and Curtis Building), February 1, 1884 to April 30, 1894**
- 5. 7th and K Streets (Old Post Office Building), May 1, 1894 to October 31, 1933.**
- 6. 9th and I Streets (New Post Office and Courthouse Building), November 1, 1933 to November 19, 1958.***
- 7. 1725 23rd Street (State of California Building), November 20, 1958 to September 28, 1964.**
- 8. 1416 9th Street (Resources Building), September 29, 1964 to August 14, 1995.**
- 9. 3310 El Camino Avenue, August 15, 1995 to present.**

On September 28, 1964, the observation site was returned to the post office building at 9th and I streets. On April 1, 1999, the sensors were moved to the Sacramento Water Treatment Plant, east of California State University-Sacramento. Temperature and precipitation data has been transmitted from these locations to the National Weather Service Office since September 28, 1964.

SOME HIGHLIGHTS OF THE WEATHER RECORDS IN SACRAMENTO

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

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

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

The greatest number of consecutive days with maximum temperatures 100 degrees or higher is nine. This has happened four times since temperature records began in July 1877: August 1-9, 1966; June 19-27, 1981; July 10-18; 1984, and August 8-16, 1996.

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, 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. In July of 2003, 17 non-consecutive days reached 100 degrees or hotter.

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

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

The all-time record for rainfall during any 24-hour period in Sacramento is 7.24 inches on April 19-20, 1880. Streets were described as "...having the appearance of miniature rivers". The rainstorm was also reported (colorfully) in such terms as "...steady and business-like", "...a perfect torrent", and "...more like a cataract 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 downpour with considerable street flooding reported. (Note: Hourly rainfall records are only available after 1903).

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

The most rainfall ever recorded in one season in Sacramento is 37.49 inches, set during the 1982-83 rainy season, under the influence of a strong El Niño. This followed the wet season of 1981-82 (32.65 inches), making it the wettest two-year period on record in Sacramento. The most recent El Niño outbreak to saturate the Sacramento area was the 1997-98 water year, during which 32.25 inches of rain fell. Since rainfall records began in 1849-50, only eight other water years have received more.

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

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

II. NORMALS

NORMALS - SACRAMENTO (City)

1971 to 2000

Latitude: 38 degrees 33' 20" N
Longitude: 121 degrees 25' 01" W
Elevation: 38 ft msl

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

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

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

Seasonal values are calculated from the daily values for each month in the season. For example, the winter maximum temperature is an average of the December, January, and February daily maximum temperatures, spring is March through May, summer June through August, and fall September through November.

A heating (or cooling) degree day is the difference between the average daily temperature and 65 degrees F. Daily Degree Day values are derived by interpolating monthly normal values by use of the natural spline function. (In some cases, where the daily normal value is less than one degree day, those values are denoted by **). The normal values of heating and cooling are derived from observed degree day readings, and may not necessarily compare with the normal daily temperature. This is especially true in the transitional months of spring and fall, when it is possible to have a normal value for cooling and heating degree days on the same date!

Temperature values are in degrees Fahrenheit. Precipitation values are given in hundredths of an inch.

<u>DATA</u>	<u>PAGE</u>
January	7
February	8
March	9
April	10
May	11
June	12
July	13
August	14
September	15
October	16
November	17
December	18

NORMALS - SACRAMENTO
1971 to 2000

Latitude: 38 degrees 33' 20" N

Longitude: 121 degrees 25' 01" W

Elevation: 38 ft msl

JANUARY

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	53	40	47	18	0	0.11	6.93
2	53	40	47	18	0	0.11	7.04
3	53	40	47	18	0	0.12	7.16
4	53	40	47	18	0	0.12	7.28
5	54	40	47	18	0	0.12	7.40
6	54	40	47	18	0	0.12	7.52
7	54	40	47	18	0	0.13	7.65
8	54	40	47	18	0	0.13	7.78
9	54	41	47	18	0	0.13	7.91
10	54	41	47	18	0	0.13	8.04
11	54	41	47	18	0	0.13	8.17
12	54	41	47	18	0	0.13	8.30
13	54	41	48	17	0	0.14	8.44
14	54	41	48	17	0	0.14	8.58
15	55	41	48	17	0	0.14	8.72
16	55	41	48	17	0	0.14	8.86
17	55	41	48	17	0	0.14	9.00
18	55	41	48	17	0	0.14	9.14
19	55	42	48	17	0	0.14	9.28
20	55	42	48	17	0	0.14	9.42
21	56	42	49	16	0	0.14	9.56
22	56	42	49	16	0	0.14	9.70
23	56	42	49	16	0	0.14	9.84
24	56	42	49	16	0	0.14	9.98
25	57	42	49	16	0	0.15	10.13
26	57	42	50	15	0	0.15	10.28
27	57	42	50	15	0	0.15	10.43
28	57	43	50	15	0	0.15	10.58
29	58	43	50	15	0	0.14	10.72
30	58	43	50	15	0	0.14	10.86
31	58	43	51	14	0	0.14	11.00
Month	55.1	41.3	48.2	521	0	4.18	
Winter	57.4	42.1	49.8	1381	0	10.71	
Annual	75.2	51.3	63.3	2226	1597	19.87	

NORMALS - SACRAMENTO

1971 to 2000

Latitude: 38 degrees 33' 20" N
 Longitude: 121 degrees 25' 01" W
 Elevation: 38 ft msl

FEBRUARY

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	59	43	51	14	0	0.14	11.14
2	59	43	51	14	0	0.14	11.28
3	59	43	51	14	0	0.14	11.42
4	60	44	52	13	0	0.14	11.56
5	60	44	52	13	0	0.14	11.70
6	60	44	52	13	0	0.14	11.84
7	61	44	52	13	0	0.14	11.98
8	61	44	53	13	0	0.14	12.12
9	61	44	53	12	0	0.14	12.26
10	61	44	53	12	0	0.14	12.40
11	62	44	53	12	0	0.14	12.54
12	62	44	53	12	0	0.14	12.68
13	62	45	53	12	0	0.14	12.82
14	62	45	54	11	0	0.14	12.96
15	63	45	54	11	0	0.13	13.09
16	63	45	54	11	0	0.13	13.22
17	63	45	54	11	0	0.13	13.35
18	63	45	54	11	0	0.13	13.48
19	63	45	54	11	0	0.13	13.61
20	64	45	55	11	0	0.13	13.74
21	64	46	55	10	0	0.13	13.87
22	64	46	55	10	0	0.13	14.00
23	64	46	55	10	0	0.13	14.13
24	64	46	55	10	0	0.13	14.26
25	64	46	55	10	0	0.13	14.39
26	64	46	55	10	0	0.13	14.52
27	65	46	55	10	0	0.13	14.65
28	65	46	55	10	0	0.12	14.77
Month	62.2	44.7	53.5	324	0	3.77	

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

NORMALS - SACRAMENTO

1971 to 2000

Latitude: 38 degrees 33' 20" N

Longitude: 121 degrees 25' 01" W

Elevation: 38 ft msl

MARCH

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	65	46	55	10	0	0.12	14.89
2	65	46	56	10	0	0.12	15.01
3	65	46	56	10	0	0.12	15.13
4	65	46	56	10	0	0.12	15.25
5	65	46	56	9	0	0.12	15.37
6	65	46	56	9	0	0.12	15.49
7	65	47	56	9	0	0.12	15.61
8	66	47	56	9	0	0.12	15.73
9	66	47	56	9	0	0.12	15.85
10	66	47	56	9	0	0.11	15.96
11	66	47	56	9	0	0.11	16.07
12	66	47	57	9	0	0.11	16.18
13	66	47	57	9	0	0.11	16.29
14	66	47	57	9	0	0.11	16.40
15	67	47	57	9	0	0.11	16.51
16	67	47	57	8	0	0.10	16.61
17	67	47	57	8	0	0.10	16.71
18	67	47	57	8	0	0.10	16.81
19	67	47	57	8	0	0.10	16.91
20	68	47	57	8	0	0.10	17.01
21	68	47	58	8	**	0.09	17.10
22	68	47	58	8	**	0.09	17.19
23	68	48	58	8	**	0.09	17.28
24	68	48	58	7	**	0.09	17.37
25	69	48	58	7	**	0.09	17.46
26	69	48	58	7	**	0.08	17.54
27	69	48	58	7	**	0.08	17.62
28	69	48	59	7	**	0.08	17.70
29	69	48	59	7	**	0.08	17.78
30	70	48	59	7	**	0.07	17.85
31	70	48	59	6	**	0.07	17.92
Month	67.0	47.1	57.1	258	11	3.15	

NORMALS - SACRAMENTO

1971 to 2000

Latitude: 38 degrees 33' 20" N
 Longitude: 121 degrees 25' 01" W
 Elevation: 38 ft msl

APRIL

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	70	48	59	6	0	0.07	17.99
2	70	48	59	6	0	0.06	18.05
3	71	48	59	6	0	0.06	18.11
4	71	48	60	6	0	0.06	18.17
5	71	48	60	6	0	0.06	18.23
6	71	48	60	6	1	0.05	18.28
7	72	49	60	5	1	0.05	18.33
8	72	49	60	5	1	0.05	18.38
9	72	49	60	5	1	0.05	18.43
10	72	49	61	5	1	0.05	18.48
11	73	49	61	5	1	0.04	18.52
12	73	49	61	5	1	0.04	18.56
13	73	49	61	5	1	0.04	18.60
14	74	49	61	5	1	0.04	18.64
15	74	49	62	5	1	0.04	18.68
16	74	49	62	4	1	0.03	18.71
17	74	50	62	4	1	0.03	18.74
18	75	50	62	4	1	0.03	18.77
19	75	50	62	4	1	0.03	18.80
20	75	50	62	4	1	0.03	18.83
21	75	50	63	4	2	0.03	18.86
22	76	50	63	4	2	0.03	18.89
23	76	50	63	4	2	0.03	18.92
24	76	51	63	4	2	0.03	18.95
25	76	51	64	4	2	0.03	18.98
26	77	51	64	3	2	0.03	19.01
27	77	51	64	3	2	0.02	19.03
28	77	51	64	3	2	0.02	19.05
29	77	51	64	3	3	0.02	19.07
30	78	51	65	3	3	0.02	19.09
Month	73.9	49.5	61.7	136	37	1.17	
Spring	74.2	50.2	62.2	459	202	4.92	
Annual	75.2	51.3	63.3	2226	1597	19.87	

NORMALS - SACRAMENTO

1971 to 2000

Latitude: 38 degrees 33' 20" N

Longitude: 121 degrees 25' 01" W

Elevation: 38 ft msl

MAY

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	78	52	65	3	3	0.02	19.11
2	78	52	65	3	3	0.02	19.13
3	78	52	65	3	3	0.02	19.15
4	79	52	65	3	3	0.02	19.17
5	79	52	66	3	3	0.02	19.19
6	79	52	66	3	4	0.02	19.21
7	79	53	66	3	4	0.02	19.23
8	80	53	66	3	4	0.02	19.25
9	80	53	66	3	4	0.02	19.27
10	80	53	67	2	4	0.02	19.29
11	80	53	67	2	4	0.02	19.31
12	81	54	67	2	4	0.02	19.33
13	81	54	68	2	4	0.02	19.35
14	81	54	68	2	4	0.02	19.37
15	81	54	68	2	4	0.02	19.39
16	82	54	68	2	4	0.02	19.41
17	82	54	68	2	4	0.02	19.43
18	82	54	68	2	5	0.02	19.45
19	82	55	69	2	5	0.02	19.47
20	83	55	69	2	5	0.02	19.49
21	83	55	69	2	5	0.02	19.51
22	83	55	69	2	5	0.02	19.53
23	83	55	69	2	5	0.02	19.55
24	84	55	70	1	5	0.02	19.57
25	84	56	70	1	6	0.02	19.59
26	84	56	70	1	6	0.02	19.61
27	84	56	70	1	6	0.02	19.63
28	85	56	70	1	7	0.02	19.65
29	85	56	70	1	7	0.02	19.67
30	85	56	71	1	7	0.01	19.68
31	85	56	71	1	7	0.01	19.69
Month	81.6	54.1	67.9	65	154	0.60	

NORMALS - SACRAMENTO

1971 to 2000

Latitude: 38 degrees 33' 20" N

Longitude: 121 degrees 25' 01" W

Elevation: 38 ft msl

JUNE

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	85	57	71	1	7	0.01	19.70
2	86	57	71	1	7	0.01	19.71
3	86	57	71	1	7	0.01	19.72
4	86	57	72	1	7	0.01	19.73
5	86	57	72	1	7	0.01	19.74
6	87	57	72	1	8	0.01	19.75
7	87	57	72	0	8	0.01	19.76
8	87	58	72	0	8	0.01	19.77
9	87	58	72	0	8	0.01	19.78
10	88	58	73	0	8	0.01	19.79
11	88	58	73	0	8	0.01	19.80
12	88	58	73	0	8	0.01	19.81
13	88	58	73	0	8	0.01	19.82
14	89	58	73	0	8	0.01	19.83
15	89	58	74	0	9	0.01	19.84
16	89	58	74	0	9	0.01	19.85
17	89	59	74	0	9	0.01	19.86
18	89	59	74	0	9	0.01	19.87
19	90	59	74	0	9	0.00	19.87
20	90	59	74	0	9	0.00	19.87
21	90	59	75	0	9	0.00	19.87
22	90	59	75	0	10	0.00	19.87
23	90	59	75	0	10	0.00	19.87
24	91	59	75	0	10	0.00	19.87
25	91	59	75	0	10	0.00	19.87
26	91	60	75	0	10	0.00	19.87
27	91	60	76	0	10	0.00	19.87
28	92	60	76	0	11	0.00	19.87
29	92	60	76	0	11	0.00	19.87
30	92	60	76	0	11	0.10	19.87
Month	88.8	58.4	73.6	6	263	0.18	

NORMALS - SACRAMENTO

1971 to 2000

Latitude: 38 degrees 33' 20" N

Longitude: 121 degrees 25' 01" W

Elevation: 38 ft msl

JULY

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	92	60	76	0	11	0.01	0.01
2	93	60	76	0	11	0.01	0.02
3	93	60	76	0	11	0.01	0.03
4	93	61	77	0	11	0.01	0.04
5	93	61	77	0	11	0.01	0.05
6	93	61	77	0	12	0.00	0.05
7	93	61	77	0	12	0.00	0.05
8	94	61	77	0	12	0.00	0.05
9	94	61	77	0	12	0.00	0.05
10	94	61	77	0	12	0.00	0.05
11	94	61	77	0	12	0.00	0.05
12	94	61	77	0	12	0.00	0.05
13	94	61	77	0	12	0.00	0.05
14	94	61	77	0	12	0.00	0.05
15	94	61	77	0	12	0.00	0.05
16	94	61	78	0	13	0.00	0.05
17	94	61	78	0	13	0.00	0.05
18	94	61	78	0	13	0.00	0.05
19	94	61	78	0	13	0.00	0.05
20	94	61	78	0	13	0.00	0.05
21	94	61	78	0	13	0.00	0.05
22	95	61	78	0	13	0.00	0.05
23	95	61	78	0	13	0.00	0.05
24	94	61	78	0	13	0.00	0.05
25	94	61	78	0	13	0.00	0.05
26	94	61	78	0	13	0.00	0.05
27	94	61	78	0	13	0.00	0.05
28	94	61	78	0	13	0.00	0.05
29	94	61	78	0	13	0.00	0.05
30	94	61	78	0	13	0.00	0.05
31	94	61	78	0	12	0.00	0.05
Month	93.8	60.9	77.4	0	382	0.05	
Summer	91.7	60.0	75.9	6	1006	0.28	
Annual	75.2	51.3	63.3	2226	1597	19.87	

NORMALS - SACRAMENTO

1971 to 2000

Latitude: 38 degrees 33' 20" N

Longitude: 121 degrees 25' 01" W

Elevation: 38 ft msl

AUGUST

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	94	61	78	0	13	0.00	0.05
2	94	61	78	0	13	0.00	0.05
3	94	61	78	0	12	0.00	0.05
4	94	61	77	0	12	0.00	0.05
5	94	61	77	0	12	0.00	0.05
6	93	61	77	0	12	0.00	0.05
7	93	61	77	0	12	0.00	0.05
8	93	61	77	0	12	0.00	0.05
9	93	61	77	0	12	0.00	0.05
10	93	61	77	0	12	0.00	0.05
11	93	61	77	0	12	0.00	0.05
12	93	61	77	0	12	0.00	0.05
13	93	61	77	0	12	0.00	0.05
14	93	61	77	0	12	0.00	0.05
15	93	61	77	0	12	0.00	0.05
16	93	61	77	0	12	0.00	0.05
17	92	61	77	0	12	0.00	0.05
18	92	61	77	0	12	0.00	0.05
19	92	61	77	0	11	0.00	0.05
20	92	61	76	0	11	0.00	0.05
21	92	61	76	0	11	0.00	0.05
22	92	61	76	0	11	0.00	0.05
23	92	61	76	0	11	0.00	0.05
24	92	61	76	0	11	0.00	0.05
25	92	61	76	0	11	0.00	0.05
26	92	60	76	0	11	0.00	0.05
27	91	60	76	0	11	0.01	0.06
28	91	60	76	0	11	0.01	0.07
29	91	60	76	0	11	0.01	0.08
30	91	60	76	0	11	0.01	0.09
31	91	60	76	0	11	0.01	0.10
Month	92.5	60.8	76.7	0	361	0.05	

NORMALS - SACRAMENTO

1971 to 2000

Latitude: 38 degrees 33' 20" N

Longitude: 121 degrees 25' 01" W

Elevation: 38 ft msl

SEPTEMBER

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	91	60	76	0	11	0.01	0.11
2	91	60	76	0	11	0.01	0.12
3	91	60	75	0	11	0.01	0.13
4	91	60	75	0	10	0.01	0.14
5	91	60	75	0	10	0.01	0.15
6	90	60	75	0	10	0.01	0.16
7	90	60	75	0	10	0.01	0.17
8	90	60	75	0	10	0.01	0.18
9	90	60	75	0	10	0.01	0.19
10	90	60	75	0	10	0.01	0.20
11	90	60	75	0	10	0.01	0.21
12	89	60	75	0	10	0.01	0.22
13	89	59	74	0	10	0.01	0.23
14	89	59	74	0	9	0.01	0.24
15	89	59	74	0	9	0.01	0.25
16	89	59	74	0	9	0.01	0.26
17	89	59	74	0	9	0.01	0.27
18	88	59	74	0	9	0.01	0.28
19	88	59	73	0	9	0.01	0.29
20	88	59	73	0	8	0.01	0.30
21	88	59	73	0	8	0.01	0.31
22	87	58	73	0	8	0.01	0.32
23	87	58	73	0	8	0.01	0.33
24	87	58	73	0	8	0.02	0.35
25	87	58	72	**	8	0.02	0.37
26	86	58	72	**	7	0.02	0.39
27	86	58	72	**	7	0.02	0.41
28	86	57	72	**	7	0.02	0.43
29	86	57	71	**	7	0.02	0.45
30	85	57	71	**	7	0.02	0.47
Month	88.6	59.0	73.8	6	270	0.37	

NORMALS - SACRAMENTO

1971 to 2000

Latitude: 38 degrees 33' 20" N

Longitude: 121 degrees 25' 01" W

Elevation: 38 ft msl

OCTOBER

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	85	57	71	0	6	0.02	0.49
2	85	57	71	0	6	0.02	0.51
3	84	56	70	0	6	0.02	0.53
4	84	56	70	0	6	0.02	0.55
5	84	56	70	0	5	0.02	0.57
6	83	56	70	1	5	0.02	0.59
7	83	56	69	1	5	0.02	0.61
8	83	55	69	1	5	0.02	0.63
9	82	55	69	1	5	0.02	0.65
10	82	55	69	1	4	0.02	0.67
11	82	55	68	1	4	0.02	0.69
12	81	55	68	1	4	0.02	0.71
13	81	54	68	1	4	0.02	0.73
14	80	54	67	1	4	0.02	0.75
15	80	54	67	2	4	0.03	0.78
16	80	54	67	2	3	0.03	0.81
17	79	54	66	2	3	0.03	0.84
18	79	53	66	2	3	0.03	0.87
19	78	53	66	2	3	0.03	0.90
20	78	53	65	3	3	0.03	0.93
21	77	53	65	3	3	0.04	0.97
22	77	52	64	3	3	0.04	1.01
23	76	52	64	3	2	0.04	1.05
24	76	52	64	3	2	0.04	1.09
25	75	52	63	4	2	0.05	1.14
26	75	51	63	4	2	0.05	1.19
27	74	51	63	4	2	0.05	1.24
28	74	51	62	5	2	0.05	1.29
29	73	50	62	5	2	0.06	1.34
30	73	50	61	5	1	0.06	1.41
31	72	50	61	5	1	0.06	1.47
Month	79.2	53.6	66.4	66	110	1.00	
Fall	77.3	52.8	65.1	380	389	3.96	
Annual	75.2	51.3	63.3	2226	1597	19.87	

NORMALS - SACRAMENTO

1971 to 2000

Latitude: 38 degrees 33' 20" N

Longitude: 121 degrees 25' 01" W

Elevation: 38 ft msl

NOVEMBER

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	71	50	61	6	1	0.07	1.54
2	71	49	60	6	1	0.07	1.61
3	70	49	60	6	1	0.07	1.68
4	70	49	59	7	1	0.07	1.75
5	69	49	59	7	1	0.08	1.83
6	69	48	58	7	1	0.08	1.91
7	68	48	58	8	1	0.08	1.99
8	67	48	58	8	1	0.08	2.07
9	67	47	57	8	1	0.08	2.15
10	66	47	57	9	0	0.09	2.24
11	66	47	57	9	0	0.09	2.33
12	65	47	56	9	0	0.09	2.42
13	65	46	56	10	0	0.09	2.51
14	65	46	55	10	0	0.09	2.60
15	64	46	55	10	0	0.09	2.69
16	64	46	55	10	0	0.09	2.78
17	63	45	54	11	0	0.09	2.87
18	63	45	54	11	0	0.09	2.96
19	62	45	54	11	0	0.09	3.05
20	62	45	53	12	0	0.09	3.14
21	62	45	53	12	0	0.10	3.24
22	61	44	53	12	0	0.10	3.34
23	61	44	52	13	0	0.09	3.43
24	60	44	52	13	0	0.09	3.52
25	60	44	52	13	0	0.09	3.61
26	60	43	52	13	0	0.09	3.70
27	59	43	51	14	0	0.09	3.79
28	59	43	51	14	0	0.09	3.88
29	59	43	51	14	0	0.09	3.97
30	58	42	50	15	0	0.09	4.06
Month	64.2	45.9	55.1	308	9	2.59	

NORMALS - SACRAMENTO

1971 to 2000

Latitude: 38 degrees 33' 20" N

Longitude: 121 degrees 25' 01" W

Elevation: 38 ft msl

DECEMBER

Date	TEMPERATURE			DEGREE DAYS		PRECIPITATION	
	Max	Min	Avg	HDD	CDD	Daily	Season
1	58	42	50	15	0	0.09	4.15
2	58	42	50	15	0	0.09	4.24
3	57	42	50	15	0	0.09	4.33
4	57	41	49	16	0	0.09	4.42
5	57	41	49	16	0	0.08	4.50
6	57	41	49	16	0	0.08	4.58
7	56	41	49	16	0	0.08	4.66
8	56	41	48	16	0	0.08	4.74
9	56	41	48	17	0	0.08	4.82
10	56	40	48	17	0	0.08	4.90
11	56	40	48	17	0	0.08	4.98
12	55	40	48	17	0	0.08	5.06
13	55	40	48	17	0	0.08	5.14
14	55	40	47	18	0	0.08	5.22
15	55	40	47	18	0	0.08	5.30
16	55	40	47	18	0	0.08	5.38
17	54	40	47	18	0	0.09	5.47
18	54	40	47	18	0	0.09	5.56
19	54	40	47	18	0	0.09	5.65
20	54	40	47	18	0	0.09	5.74
21	54	40	47	18	0	0.09	5.83
22	54	40	47	18	0	0.09	5.92
23	54	40	47	18	0	0.09	6.01
24	54	40	47	18	0	0.09	6.10
25	54	40	47	18	0	0.10	6.20
26	54	40	47	18	0	0.10	6.30
27	54	40	47	18	0	0.10	6.40
28	53	40	46	19	0	0.10	6.50
29	53	40	47	19	0	0.10	6.60
30	53	40	47	18	0	0.11	6.71
31	53	40	47	18	0	0.11	6.82
Month	55.0	40.4	47.7	536	0	2.76	

III. DAILY RECORDS

SACRAMENTO CLIMATE

MONTH: JANUARY

	Normal	Record	Record	Record		Record	Record	Record			Grtst	
	Max	Max	Max	Low	Low Max	Normal	Record	Min	High	High Min	Greatest	Pcpn
			Year	Max	Year	Min	Min	Year	Min	Year	Pcpn	Year
Jan 01	52	65	1887	38	1920	39	24	1919	60	1997	1.90	1883
Jan 02	52	65	1940	36	1961**	39	25	1961	56	1997	1.79	1940
Jan 03	52	64	2001	37	1961**	39	26	1950	53	1900	2.60	1916
Jan 04	52	64	2003	37	1961**	39	25	1949	53	1948	3.10	1982
Jan 05	52	67	1948	33	1961**	39	26	1949	55	1986	1.68	1978
Jan 06	53	71	1911	35	1961	39	24	1950	53	1948	1.14	1993
Jan 07	53	65	1943	36	1968	39	24	1937	54	1948	1.02	1940
Jan 08	53	66	1990**	37	1968	39	22	1937	57	1953	1.51	2001
Jan 09	53	70	1990	37	1926**	39	22	1937	58	1953	2.83	1995
Jan 10	53	66	1996**	35	1926	39	25	1949	57	1959	1.72	1995
Jan 11	53	67	1959**	35	1929**	40	22	1949	54	1959	1.44	1952
Jan 12	53	69	1980	36	1929**	40	28	1949	56	1980	2.53	1990
Jan 13	53	65	2003	35	1926	40	27	1963**	59	1980	2.53	1993
Jan 14	53	65	1994**	35	1929	40	19	1888	56	1909	1.69	1911
Jan 15	53	67	1981**	37	1903**	40	19	1888	55	1909	2.25	1894
Jan 16	54	68	1991	39	1888	40	24	1888**	56	1909	1.53	1973
Jan 17	54	69	1986	40	1982	40	22	1888	56	1998	1.90	1921
Jan 18	54	70	1976	40	1922	40	25	1888	56	1896	1.22	1973
Jan 19	54	71	1991	41	1961	40	27	1922**	54	1999	1.46	1969
Jan 20	54	69	1976	36	1937	40	22	1883	55	1969	2.10	1964
Jan 21	55	70	1976	34	1962	40	22	1937	57	1970	3.14	1943
Jan 22	55	66	2001**	40	1992**	41	24	1937	59	1970	2.13	1997
Jan 23	55	69	1948	39	1992	41	27	1937	54	1970	2.50	1886
Jan 24	56	70	1984**	39	1893	41	28	1949	54	1903	3.11	2000
Jan 25	56	71	1899	40	1893	41	24	1937	53	1886	1.34	1890
Jan 26	56	70	1899	40	1963	41	28	1949	54	1942**	1.35	1997
Jan 27	56	68	1994**	40	1963	41	27	1957	53	1997	1.78	1896
Jan 28	57	75	1994**	43	1977**	41	29	1898**	53	1997**	1.32	1926
Jan 29	57	70	1976	40	1922	42	25	1880	56	1967	2.66	1881
Jan 30	57	73	1976	40	1922	42	28	1957	56	1967	1.70	1963
Jan 31	58	74	1976	44	1978**	42	29	2002	55	1995**	1.42	1938

MONTHLY SUMMARY

Max Extreme 75 Jan 28 1994**

Min Extreme 19 Jan 15 1888*

Low Max 33 Jan 05 1961**

High Min 60 Jan 01 1997

Average Max 55.1

Average Min 41.3

Average Temperature 48.2

Max Pcpn 3.14 Jan 21 1943

*Also occurred prior dates in month

**Also occurred prior years

SACRAMENTO CLIMATE

MONTH: FEBRUARY

	Normal	Record	Record	Record	Normal	Record	Record	Record	Greatest	Grtst		
	Max	Max	Max	Low		Min	Min	Min			High	High
	Max	Max	Year	Max	Year	Min	Min	Year	Min	Year	Pcpn	Year
Feb 01	58	74	1976	42	1932	42	28	1950	58	1963	2.74	1945
Feb 02	58	76	1976	42	1883	42	26	1950	56	1963	2.40	1944
Feb 03	59	71	1992	40	1883	43	22	1883	56	1963**	1.72	1881
Feb 04	59	72	2001**	42	1899	43	23	1883	57	1996	2.32	1937
Feb 05	60	70	1996	42	1989**	43	24	1989	58	1996	1.80	1901
Feb 06	60	73	1996**	43	1949	43	24	1989	55	1963	1.30	1998
Feb 07	60	70	1987	44	1929**	43	23	1989	54	1960**	1.21	1999
Feb 08	60	70	1988	43	1901	43	23	1989	55	1975	1.17	1985
Feb 09	61	70	1988	43	1989	43	28	1891**	53	1992**	2.19	1962
Feb 10	61	74	1988	44	1939	44	29	1933**	55	1996**	1.96	1919
Feb 11	61	75	1988	44	1894**	44	30	1884	54	1970	2.34	1936
Feb 12	61	74	1996**	45	1884	44	25	1884	56	1879	2.48	1904
Feb 13	62	74	1971	47	1884	44	21	1884	54	1996**	1.61	1926
Feb 14	62	76	1930	44	1911	44	27	1884	56	1986**	1.34	1992
Feb 15	62	76	1977	42	1884	44	30	1990	57	1982	1.86	1891
Feb 16	62	76	1977	47	1990	44	30	1883	56	1996	1.94	1990
Feb 17	63	76	1977	45	1990**	44	30	1880	57	1996	3.21	1986
Feb 18	63	80	1899	46	1890**	45	31	1990**	56	1980	1.91	1958
Feb 19	63	77	1964**	44	1897	45	31	1882	54	1968	2.16	1894
Feb 20	63	75	1995	45	1880	45	31	1953**	56	1968	1.21	1914
Feb 21	63	75	1995**	42	1913	45	31	1955	56	1968	1.26	1917
Feb 22	63	78	1985	48	1951**	45	33	1920	56	1904	1.05	2000
Feb 23	64	79	1991	48	1890	45	32	1890	58	1968	1.26	1981
Feb 24	64	77	1991	48	1930**	45	35	1960**	55	1957	1.82	1917
Feb 25	64	77	1992**	49	1887	45	30	1887	55	1957**	1.31	2004
Feb 26	64	77	1992	44	1962	45	30	1962	55	1957	1.46	1940
Feb 27	64	80	1985	44	1911	45	30	1962	54	1980**	2.19	1940
Feb 28	64	79	1985	49	1951**	45	33	1955**	55	1976	1.41	1935
Feb 29	64	73	1924	54	1920**	45	36	1888	53	1992	0.61	1976

MONTHLY SUMMARY

Max Extreme 80	Feb 27 1985*	Min Extreme 21	Feb 13 1884
Low Max 40	Feb 03 1883	High Min 60	Feb 23 1968*
Average Max 62.2		Average Min 44.7	Average Temperature 53.5
Max Pcpn 3.21	Feb 17 1986		

*Also occurred prior dates in month

**Also occurred prior years

SACRAMENTO CLIMATE

MONTH: MARCH

	Normal	Record	Record	Record	Normal	Record	Record	Record	Greatest	Grtst		
	Max	Max	Max	Low		Min	Min	Min			High	High
			Year	Max	Year	Year	Year	Year	Pcpn	Year		
Mar 01	64	76	1936	49	1911	45	32	1971	55	1995**	1.33	1911
Mar 02	64	79	1994	45	1976	45	32	1953	54	1995**	1.91	1995
Mar 03	64	80	1929	47	1894	45	31	1951	55	1905**	0.95	1906
Mar 04	64	78	1986**	46	1951	45	33	1939**	55	1884	1.26	1978
Mar 05	64	82	1986	49	1908	45	33	1880	56	1884	1.97	1879
Mar 06	65	80	1953	47	1952**	45	32	1918	56	1892	1.80	1952
Mar 07	65	81	1953	48	1918	45	32	1964	58	1986	0.74	1986
Mar 08	65	80	2004**	50	1939**	46	34	2002**	57	1993**	1.37	1939
Mar 09	65	81	2004	49	1939	46	34	1882	58	1983	2.62	1884
Mar 10	65	84	2005	48	1922	46	34	1951	58	1983	1.44	1918
Mar 11	65	85	2005	47	1922	46	34	1922	56	1916	1.18	1893
Mar 12	65	80	2005**	47	1969	46	31	1950	56	1972	1.30	1983
Mar 13	65	82	2004	50	1919	46	33	1954	56	1993	2.38	1889
Mar 14	66	83	2004	46	1942	46	32	1942	56	1970	1.47	1942
Mar 15	66	85	2004	49	1906	46	29	1880	56	1878	2.20	1899
Mar 16	66	86	2004**	48	1945	46	31	1898	60	1914	1.15	1907
Mar 17	66	86	2004	49	1886	46	35	1955	60	1914	0.75	1991
Mar 18	66	84	2004	52	1954**	46	34	1945**	55	1996**	1.74	1907
Mar 19	66	82	2004**	50	1937	46	35	1898	60	1914	0.76	1954
Mar 20	67	84	2004**	50	1946**	46	33	1952	56	1984	0.97	1910
Mar 21	67	83	2004	48	1973	46	35	1952	59	1997	2.52	1937
Mar 22	67	82	1926**	46	1964	46	34	1987	57	1998	1.09	1995
Mar 23	67	80	1997**	47	1913	46	30	1898	56	1998**	1.55	1906
Mar 24	67	83	1997	50	1991**	46	34	1945**	60	1896	1.06	1991
Mar 25	68	86	1997	48	1907	47	34	1936	60	1896	0.98	1884
Mar 26	68	90	1988	48	1991	47	32	1898	57	1997**	1.61	1883
Mar 27	68	85	1923	52	1884	47	32	1898	59	1882	1.33	1963
Mar 28	68	84	1986	53	1905**	47	37	1892	57	1986**	1.28	1904
Mar 29	68	86	2002	51	1914**	47	36	1897	59	1881	0.96	1940
Mar 30	69	86	1966	51	1967**	47	34	1938	59	1881	2.27	1906
Mar 31	69	90	1966	50	1982	47	37	1936	57	1885	1.83	1982

MONTHLY SUMMARY

Max Extreme 90	Mar 31 1966*	Min Extreme 29	Mar 15 1880
Low Max 45	Mar 02 1976	High Min 60	Mar 25 1896*
Average Max 67.0		Average Min 47.1	Average Temperature 57.1
Max Pcpn 2.62	Mar 09 1884		

*Also occurred prior dates in month

**Also occurred prior years

SACRAMENTO CLIMATE

MONTH: APRIL

	Normal	Record	Record	Record		Normal	Record	Record	Record		Grtst	
	Max	Max	Max	Low	Low Max	Min	Min	Min	High	High Min	Greatest	Pcpn
			Year	Max	Year			Year	Min	Year	Pcpn	Year
Apr 01	69	90	1966	52	1982	47	36	1936	56	1966	1.25	1958
Apr 02	69	88	2000**	52	1958	47	37	1963**	56	1966**	2.23	1958
Apr 03	70	89	1966	53	1928**	47	36	1955	58	1961	1.55	1936
Apr 04	70	86	1960	52	1938**	47	35	1901	60	1961	1.86	1941
Apr 05	70	88	1985	50	1929	47	36	1929	56	1972	1.34	1926
Apr 06	70	91	1989	54	2001	48	34	1929	57	1995**	0.96	1896
Apr 07	71	91	1989	54	1893	48	36	1929	60	1878	3.35	1935
Apr 08	71	91	1989	54	1965	48	34	1953	63	1883**	1.02	1926
Apr 09	71	95	1989	52	1965	48	34	1929	60	1989**	1.37	1884
Apr 10	71	93	1988	52	1912	48	34	1927	60	1885	1.88	1982
Apr 11	72	95	1988	51	1956	48	37	1953	62	1904	0.60	1886
Apr 12	72	89	1990**	50	1922	48	36	1912	58	1904	0.90	2003
Apr 13	72	95	1990	50	1956	48	37	1945	60	1897	0.76	1942
Apr 14	72	94	1985	52	1920	48	36	1921	59	1897	1.20	1963
Apr 15	73	92	1987	51	1880	48	36	1896	61	1925	1.84	1880
Apr 16	73	92	1987	55	1880	49	36	1917	62	1897	0.30	1957
Apr 17	73	90	1954	55	1955**	49	36	1933**	59	1999	1.48	2000
Apr 18	73	91	1939	54	1967	49	38	1933	62	1907	0.90	1890
Apr 19	74	91	1939	53	1988**	49	39	1933	64	1907	1.00	1988
Apr 20	74	92	1931	49	1963	49	38	1904	60	1907	5.28	1880
Apr 21	74	96	1931	54	1967	49	36	1963**	62	1931**	3.09	1880
Apr 22	74	92	1984	54	1980	49	39	1920	60	1895	0.52	1990
Apr 23	75	92	1946	54	1924	50	39	1920	62	1910	0.60	1896
Apr 24	75	94	1946	57	1951**	50	38	1964	59	1996**	1.90	1896
Apr 25	75	92	1987	54	1952	50	40	1891**	61	1926	0.61	1952
Apr 26	76	98	2004	54	1911	50	39	1892	63	1926	0.62	1960
Apr 27	76	96	2004**	56	1904**	50	38	1955	62	1965**	1.54	1953
Apr 28	76	94	1992**	56	1948**	50	40	1970**	61	1992	1.24	1983
Apr 29	76	96	1981	53	1948	51	39	1948	63	1981	1.52	1901
Apr 30	77	97	1996	54	1938	51	39	1933	62	1993**	0.57	1995

MONTHLY SUMMARY

Max Extreme 98	Apr 26 2004	Min Extreme 34	Apr 10 1927*
Low Max 49	Apr 20 1963	High Min 64	Apr 19 1907
Average Max 73.9		Average Min 49.5	Average Temperature 61.7
Max Pcpn 5.28	Apr 20 1883		

*Also occurred prior dates in month

**Also occurred prior years

SACRAMENTO CLIMATE

MONTH: MAY

	Normal	Record	Record	Record		Normal	Record	Record	Record		Grtst	
	Max	Max	Max	Low		Low Max	Min	Min	Min		High	High Min
			Year	Max	Year	Min	Min	Year	Min	Year	Pcpn	Year
May 01	77	97	1996	56	1915	51	39	1920	66	1996	0.59	1905
May 02	77	96	1992	56	1950	51	40	1964	66	1996	0.56	1971
May 03	78	97	1992	55	1892	51	37	1950	64	1990	0.76	1956
May 04	78	100	1990	56	1892	51	42	1952**	65	1989	0.85	1883
May 05	78	100	1987	57	1964	52	42	1988	65	1990	1.94	1889
May 06	78	104	1987	57	1994	52	39	1933	67	1987	1.24	1994
May 07	79	105	1987	54	1905	52	39	1887	68	1987	1.31	1905
May 08	79	100	2001	55	1963	52	40	1933	70	1987	0.78	1893
May 09	79	98	2001	57	1922	52	39	1896	67	1987	0.41	1980
May 10	79	100	1987	58	1887	52	41	1933	67	1897	0.48	1942
May 11	80	102	1987	58	1880	53	40	1930	68	1897	1.00	1915
May 12	80	102	1987	55	1880	53	39	1880	66	1976**	0.62	1925
May 13	80	102	1976	58	1968	53	40	1882	70	1987	0.95	1941
May 14	80	103	1987	58	1894	53	41	1899	67	1987	0.39	1953
May 15	81	99	1927	58	1911	53	40	1906	68	1910	1.67	1996
May 16	81	102	1970	61	1898**	53	40	1894	69	1970	0.38	1996
May 17	81	101	1997	60	1911	54	43	1883	70	1997	0.43	1879
May 18	82	104	1997	58	1911	54	42	1917	71	1997	0.82	1957
May 19	82	99	2001	60	1948	54	41	1896	66	1920	0.46	1948
May 20	82	102	1947	56	1957**	54	44	1901**	67	1931	1.22	2002
May 21	82	101	2001**	61	1933	54	45	1960**	69	1892	0.45	1939
May 22	82	103	2000	60	1977	54	42	1960	70	1943	0.65	1958
May 23	83	99	2001**	57	1960	55	45	1916	70	2000	0.37	1960
May 24	83	100	2001	58	1916	55	43	1953	72	1890	0.62	1993
May 25	83	100	1951	58	1917	55	43	1899	68	1883	0.77	1906
May 26	83	102	1974	63	1906	55	42	1918	69	1951**	0.30	1901
May 27	84	104	1984	56	1906	55	45	1927	67	1984	1.56	1990
May 28	84	107	1984	57	1998	55	44	1927	72	1887	1.27	1998
May 29	84	101	1973	63	1911	55	44	1985	71	1973	0.26	1948
May 30	84	103	1910	61	1932	56	44	1923**	68	2002**	1.67	1948
May 31	85	106	2001	58	1899	56	45	1923	68	1892**	0.44	1899

MONTHLY SUMMARY

<p>Max Extreme 107 May 28 1984</p> <p>Low Max 54 May 07 1905</p> <p>Average Max 81.6</p> <p>Max Pcpn 1.94 May 05 1889</p>	<p>Min Extreme 37 May 03 1950</p> <p>High Min 72 May 28 1887*</p> <p>Average Min 54.1</p> <p style="text-align: right;">Average Temperature 67.9</p>
--	--

*Also occurred prior dates in month

**Also occurred prior years

SACRAMENTO CLIMATE

MONTH: JUNE

	Normal	Record	Record	Record		Normal	Record	Record	Record		Grtst	
	Max	Max	Max	Low		Low Max	Min	Min	Min		High	High Min
			Year	Max	Year	Min	Min	Year	Min	Year	Pcpr	Year
Jun 01	85	104	1970	62	1967**	56	43	1929	69	1960	0.45	1899
Jun 02	85	106	1960	59	1967	56	45	1933**	71	1960	0.15	1967
Jun 03	85	107	1960	64	1936	56	46	1944**	71	1893	0.38	1894
Jun 04	86	103	1935**	66	1984**	56	46	1939	70	1981**	0.81	1993
Jun 05	86	108	1926	60	1967	57	47	1988**	71	1883	0.23	1934
Jun 06	86	105	1978	57	1914	57	46	1988	73	1974	0.44	1953
Jun 07	86	102	1883	64	1927	57	44	1950	73	1903	0.57	1927
Jun 08	86	103	1973	57	1964	57	46	1892	71	1973	0.36	2005
Jun 09	86	103	1883	59	1964	57	46	1892	74	1883	0.34	1929
Jun 10	87	105	1918	67	1955	57	48	1917	72	1921	0.13	1879
Jun 11	87	107	1985**	64	1907	58	48	1901	72	1985	0.32	1907
Jun 12	87	105	1985	62	1884	58	44	1952	68	1960	0.80	1884
Jun 13	88	107	1985	60	1907	58	48	1952**	68	2000	0.53	1907
Jun 14	88	109	1961	65	1944	58	47	1907	75	1966	0.11	1995
Jun 15	88	111	1961	62	1944	58	47	1944	71	1961	0.60	1929
Jun 16	88	108	1985	66	2005	58	47	1944**	73	1985	0.25	1995
Jun 17	88	102	1976	66	1909	58	48	1910	68	1993**	0.03	1909
Jun 18	89	105	1945**	66	2005	58	48	1910**	70	1981**	T	1949
Jun 19	89	106	1988	65	1930	58	50	1910**	76	1917	0.66	1974
Jun 20	89	108	1920	63	1908	59	46	1910	74	1981	0.04	1897
Jun 21	89	108	1961	68	1907	59	46	1908	73	1993	0.02	1943
Jun 22	90	107	1981	65	1923	59	48	1943	74	1981	0.09	1923
Jun 23	90	106	1988	59	1912	59	50	1930	78	1909	0.44	1912
Jun 24	90	110	1925	64	1899	59	49	1918	74	1976	0.23	1914
Jun 25	90	111	1925	68	1906	59	48	1901	74	1995**	0.13	20011 988
Jun 26	90	106	1973**	61	1906	59	48	1930	74	1995	0.05	1971
Jun 27	91	108	1976	65	1889	59	49	1906	73	1973	0.25	1889
Jun 28	91	108	1976	65	1991	59	47	1916	74	1891	0.56	1991
Jun 29	91	107	1950	73	1992	59	50	1949	75	1891	0.19	1992*
Jun 30	91	112	1934	71	1982	59	49	1881	74	1891	0.01	1916

MONTHLY SUMMARY

Max Extreme 112	Jun 30 1934	Min Extreme 43	Jun 01 1929
Low Max 57	Jun 08 1964*	High Min 78	Jun 23 1909
Average Max 88.8		Average Min 58.4	Average Temperature 73.6
Max Pcpr 0.81	Jun 04 1993		

*Also occurred prior dates in month

**Also occurred prior years

SACRAMENTO CLIMATE

MONTH: JULY

	Normal	Record	Record	Record	Normal	Record	Record	Record	Greatest	Grtst		
	Max	Max	Max	Low		Min	Min	Min			High	High
			Year	Max	Year	Min	Year	Year	Pcpn	Year		
Jul 01	92	108	1950	71	1916	59	50	1919	74	1996	0.07	1916
Jul 02	92	109	1991	68	1938	60	50	1919	73	1991	0.28	1980
Jul 03	92	111	1991	65	1910	60	47	1901	74	1970	T	1924**
Jul 04	92	110	1991	68	1948**	60	50	1999**	75	2001**	0.01	1925
Jul 05	92	107	1931	71	1915	60	50	1919	72	1931	0.04	1895
Jul 06	92	105	1989	76	1935	60	50	1899	71	1957	T	1936
Jul 07	93	110	1989	73	1891	60	50	1926	74	1905	0.03	1974
Jul 08	93	110	1905	68	1974	60	51	1930**	74	1905**	0.86	1974
Jul 09	93	109	2002	73	1904	60	51	1888	72	1896	0.01	1974
Jul 10	93	112	2002	72	1892**	60	50	1932**	72	1896	T	1952
Jul 11	93	110	1961	75	1914**	60	50	1898	76	1913	T	1908
Jul 12	93	111	1990	71	1956	60	49	1899	74	2002	T	1961
Jul 13	93	112	1972	71	1920	60	50	1903	75	1999**	T	1942
Jul 14	94	113	1972	75	1907	60	50	1918	77	1972	T	1935
Jul 15	94	109	1926	74	1975	60	51	1903**	74	1984**	0.02	1975
Jul 16	94	108	1935	74	1923	60	51	1903**	73	1886	T	1917
Jul 17	94	114	1925	75	1987	60	48	1887	75	1988	0.01	1995
Jul 18	94	112	1988	69	1932	60	50	1921	74	2003	T	1922
Jul 19	94	110	1998	72	1907	61	49	1887	74	1998	0.00	
Jul 20	94	107	1933	74	1985**	61	50	1887	75	1917	T	1943
Jul 21	94	106	1996**	74	1987**	61	50	1887	74	2003	0.22	1979
Jul 22	94	105	2003	75	1925**	61	50	1918	71	2003**	T	1959
Jul 23	94	107	1942	77	1903	61	50	1889	70	1956**	T	1959
Jul 24	94	108	1985**	78	1977	61	52	1930**	73	1974	T	1937
Jul 25	94	109	1975	74	1946**	61	52	1919	77	1974	0.01	1988
Jul 26	94	110	1933	74	1941	61	51	1920**	72	1973	T	1950**
Jul 27	94	108	1980**	74	1941	61	50	1899	72	1933	T	1896
Jul 28	94	107	1954	70	1919	61	50	1930	74	1967	0.01	1964
Jul 29	94	106	1996	75	1985	61	51	1919**	73	1996	0.00	
Jul 30	94	109	1977	68	1966	61	50	1919	71	2003	0.07	1966**
Jul 31	94	109	1996	74	1933**	61	51	1919	74	1980	T	1949

MONTHLY SUMMARY

Max Extreme 114	Jul 17 1925	Min Extreme 47	Jul 03 1901
Low Max 65	Jul 03 1910	High Min 77	Jul 25 1974*
Average Max 93.8		Average Min 60.9	Average Temperature 77.4
Max Pcpn 0.86	Jul 08 1974		

*Also occurred prior dates in month

**Also occurred prior years

SACRAMENTO CLIMATE

MONTH: AUGUST

	Normal	Record	Record	Record		Normal	Record	Record	Record		Grtst	
	Max	Max	Max	Low	Low Max	Min	Min	Min	High	High Min	Greatest	Pcpn
			Year	Max	Year	Min	Min	Year	Min	Year	Pcpn	Year
Aug 01	94	109	1993	76	1933	61	51	1910	74	1977**	T	1918
Aug 02	94	108	1987	69	1953	61	50	1887	76	1993	0.06	20031 917
Aug 03	93	107	1998**	73	1953**	61	51	1919	75	1885	T	1899
Aug 04	93	111	1998	70	1950	61	50	1897	77	1998	0.02	1899
Aug 05	93	109	1990	78	1962**	61	50	1950	75	1998	0.01	1974
Aug 06	93	108	1978	77	1906**	61	50	1891	76	1961	T	1961
Aug 07	93	109	1997	75	1907	61	50	1931	76	1983	0.25	1989
Aug 08	93	110	1990	74	1916	61	50	1919**	71	1990**	0.13	1962
Aug 09	93	109	1996**	72	1949	61	50	1931	75	1990	T	1963
Aug 10	93	110	1996	75	1916	60	50	1919	72	1996	0.01	1965
Aug 11	93	110	1996**	72	1965	60	49	1910	75	1996	0.58	1965
Aug 12	93	107	1996	73	1988	60	50	1910**	75	1996	T	1923
Aug 13	92	111	1933	73	1968**	60	48	1921	75	1996	T	1953
Aug 14	92	107	1920	70	1976	60	49	1887	73	1993**	0.15	1976
Aug 15	92	108	1920	72	1918	60	51	1955	74	1983**	0.28	1976
Aug 16	92	107	1992	75	1918	60	50	1955	73	1983	0.02	1958
Aug 17	92	106	1967**	67	1985	60	51	1917	74	1966	0.10	1976
Aug 18	92	107	1950	68	1975	60	51	1985	70	1883	0.11	1975
Aug 19	92	108	1950	73	1968	60	51	1890	69	1992**	0.08	1968
Aug 20	92	106	1950	72	1959	60	48	1914	69	1995**	0.20	1997
Aug 21	92	102	1982**	72	1922	60	49	1910	68	1969	0.22	20035
Aug 22	91	106	1891	72	1901**	60	50	1901	68	1995	0.06	2003
Aug 23	91	109	1913	74	1963**	60	50	1908**	74	1891	0.01	1904
Aug 24	91	108	1931**	76	1990**	60	50	1887	73	1913	0.06	1904
Aug 25	91	105	1988	68	1920	60	52	1914**	69	1931	0.27	1954
Aug 26	91	106	1988**	73	1975	60	50	1929**	74	1988**	0.08	1954
Aug 27	91	108	1894	71	1881	60	51	1952**	73	1894	0.01	1949
Aug 28	91	105	1915	67	1895	60	50	1910	74	1913	T	1949
Aug 29	91	108	1987	67	2000	60	49	1880	71	1977	0.67	1953
Aug 30	91	110	1987	70	1914	60	48	1887	70	1988	0.20	1896
Aug 31	90	108	1976	66	1964	60	51	1914**	68	1972	0.06	1964

MONTHLY SUMMARY

Max Extreme 111 Aug 13 1933**	Min Extreme 48 Aug 30 1887**
Low Max 66 Aug 31 1964	High Min 77 Aug 04 1998
Average Max 92.5	Average Min 60.8
Max Pcpn 0.67 Aug 29 1953	Average Temperature 76.7

*Also occurred prior dates in month

**Also occurred prior years

SACRAMENTO CLIMATE

MONTH: SEPTEMBER

	Normal	Record	Record	Record	Normal	Record	Record	Record	Record	Record	Greatest	Grtst
	Max	Max	Max	Low		Low	Min	High		High		
			Year	Max	Year	Min	Min	Year	Min	Year	Pcpn	Year
Sep 01	90	109	1950	69	1898	60	48	1899	71	1998	0.16	2000
Sep 02	90	109	1955	70	1913	60	49	1898	72	1950	0.15	1912
Sep 03	90	108	1955	68	1912	59	50	1910**	72	1998	0.16	1897
Sep 04	90	108	1988	67	1900	59	47	1914	74	1998	T	1900
Sep 05	90	108	1988	70	1912	59	50	1930**	73	1998	0.18	1912
Sep 06	90	105	1923	62	1912	59	49	1900**	74	1998	0.89	1912
Sep 07	89	107	1923	67	1920	59	50	1935**	74	1998	0.39	1919
Sep 08	89	107	1944	64	1920	59	47	1914	73	1944	0.20	1998
Sep 09	89	108	1944	64	1978	59	45	1898	73	1944	0.26	1985
Sep 10	89	105	1888	67	1952	59	46	1985	67	1953**	0.27	1895
Sep 11	89	106	1888	70	1893	59	49	1911	70	1888	0.49	1976
Sep 12	89	104	1983	64	1895	59	44	1893	69	1953	3.13	1918
Sep 13	88	104	1971	67	1939	59	45	1910	70	1983**	0.29	1918
Sep 14	88	104	1979	68	1931	59	46	1939	71	1953	0.44	1955
Sep 15	88	104	1979**	69	1977	59	47	1939	69	1922	0.43	1888
Sep 16	88	105	1979	60	1977	58	48	1960	69	1922**	1.75	1989
Sep 17	88	106	1884	63	1921	58	48	1924**	71	1923	0.62	1950
Sep 18	87	104	1984	65	1989	58	44	1882	77	1984	1.46	1959
Sep 19	87	101	2000**	62	1896	58	46	1947**	72	1939	1.93	2004
Sep 20	87	102*	2002	68	1945**	58	48	1986**	72	1939	0.06	1896
Sep 21	87	103	1987	66	1901	58	48	1960	73	1939	0.15	1916
Sep 22	86	103	2003	60	1917	58	46	1895	74	1939	0.50	1917
Sep 23	86	102	1939	61	1901	57	46	1945	70	1939	1.74	1904
Sep 24	86	102	1936	66	1986**	57	45	1920	66	1982**	0.61	1904
Sep 25	86	100	1952	62	1909	57	44	1934	66	1991**	1.15	1904
Sep 26	86	103	1963	64	1986	57	46	1923	70	1952	0.41	1972
Sep 27	85	102	1963	64	1965	57	46	1986	67	1963	0.62	1957
Sep 28	85	100	1966	63	1919	57	46	1986**	67	1966	0.37	1989
Sep 29	84	103	1966**	62	1919**	57	48	1955**	68	1966	0.80	1890
Sep 30	84	102	1991	58	1930**	56	46	1894	66	1988	0.74	1883

MONTHLY SUMMARY

Max Extreme 109	Sep 02 1955*	Min Extreme 44	Sep 25 1934*
Low Max 58	Sep 30 1930**	High Min 77	Sep 18 1984
Average Max 88.6		Average Min 59.0	Average Temperature 73.8
Max Pcpn 3.13	Sep 12 1918		

*Also occurred prior dates in month

**Also occurred prior years

SACRAMENTO CLIMATE

MONTH: OCTOBER

	Normal	Record	Record	Record		Normal	Record	Record	Record		Grtst	
	Max	Max	Max	Low Max		Min	Min	Min	High		High Min	Greatest
			Year	Max	Year	Min	Min	Year	Min	Year	Pcpn	Year
Oct 01	84	101	2001**	56	1909	56	43	1950	63	1980**	0.79	1909
Oct 02	84	102	2001**	61	1916	56	44	1903	64	1980**	0.34	1898
Oct 03	84	102	1987**	58	1909	56	42	1884	66	1980	1.82	1882
Oct 04	83	102	1987**	61	1900	56	42	1881	68	1980	0.45	1994
Oct 05	83	102	1987	56	1924	55	42	1916	66	1933	1.12	1924
Oct 06	83	102	1987	60	1882	55	44	1913	62	1987**	0.41	1923
Oct 07	82	100	1980	60	1973	55	41	1881	65	1996**	0.60	1889
Oct 08	82	101	1996	62	1922	55	42	1881	65	1996	0.63	1904
Oct 09	82	96	1980	63	1924**	55	43	1930	70	1899	0.79	1947
Oct 10	81	100	1991	57	1924	54	44	1941**	64	1991**	0.98	1926
Oct 11	81	96	1992**	57	1925	54	40	1886	66	1991	1.44	1948
Oct 12	80	97	1991	55	1899	54	42	1924	64	1991	2.17	1962
Oct 13	80	94	1991	50	1899	54	40	1881**	62	1991**	3.63	1962
Oct 14	80	98	1991	56	1878	54	36	1881	63	1979	0.75	1935
Oct 15	79	94	1961	57	1938	53	38	1881	64	1991**	0.78	1969
Oct 16	79	95	1961	49	1984	53	41	1984**	61	1933	0.69	1984
Oct 17	78	96	1988	60	1892	53	38	1984**	61	1974	0.43	1914
Oct 18	78	94	1988	59	1984	53	39	1905	60	1988	0.42	1958
Oct 19	78	91	1991**	55	1908	53	43	1949**	59	1991	0.82	2004
Oct 20	77	92	2003	58	1961**	52	37	1949**	62	1966**	1.14	1889
Oct 21	77	93	2003	59	1985	52	38	1886	60	1982**	1.94	1889
Oct 22	76	89	1988**	56	1897	52	40	1914	62	1982	1.32	1889
Oct 23	76	90	1965	56	1897	52	40	1885	62	1982	1.18	1897
Oct 24	75	91	1959	57	1962	51	37	1956	60	1959	0.94	1951
Oct 25	75	89	1965	57	1919	51	40	1900	61	1917	1.19	1979
Oct 26	74	91	2003	58	1883	51	39	1939	60	1901	1.02	1950
Oct 27	74	90	2003	56	1922	51	40	1921	60	1987	1.00	1901
Oct 28	72	90	2003	57	1971	50	34	1946	60	1987	1.09	1981
Oct 29	73	84	1965	57	1996	50	37	1916	60	1983	0.80	1992
Oct 30	72	84	1993**	50	1886	50	34	1935	61	1983	0.95	1945
Oct 31	71	86	1966	56	2003**	50	38	1971**	61	1983	0.63	1944

MONTHLY SUMMARY

Max Extreme 102 Oct 06 1987*

Min Extreme 34 Oct 30 1935*

Low Max 49 Oct 16 1984

High Min 70 Oct 09 1899

Average Max 79.2

Average Min 53.6

Average Temperature 66.4

Max Pcpn 3.63 Oct 13 1962

*Also occurred prior dates in month

**Also occurred prior years

SACRAMENTO CLIMATE

MONTH: NOVEMBER

	Normal	Record	Record	Record	Normal	Record	Record	Record	Record	Greatest	Grstst	
	Max	Max	Max	Low		Min	Min	Min	High			High
	Max	Max	Year	Max	Year	Min	Min	Year	Min	Year	Pcpn	Year
Nov 01	71	86	1997**	50	1935	49	34	1886	60	1992	0.67	1935
Nov 02	70	86	1966	53	1935	49	36	1936	57	1988**	0.80	1882
Nov 03	70	85	1976	52	1935	49	35	1935	58	1988**	1.16	1882
Nov 04	69	84	1980	52	1918	49	30	1935	58	1941	1.37	1970
Nov 05	69	85	1976	52	1973**	48	34	1935	59	1891	1.29	1994
Nov 06	68	84	1976	53	1922	48	35	1920	56	1913	1.40	1966
Nov 07	68	83	1931	53	1920	48	36	1897**	58	1973	1.40	20025
Nov 08	67	82	1955	53	1942**	48	34	1897	58	1970**	0.99	1954
Nov 09	66	83	1976**	50	1982	48	36	1920	57	1976**	1.28	1924
Nov 10	66	80	1990**	47	1920	47	35	1946	59	1976	1.64	1983
Nov 11	65	79	1990	46	1985	47	31	1911	59	2001	0.81	1877
Nov 12	65	81	1990	49	1985**	47	30	1938	57	1981	1.84	1981
Nov 13	65	78	1995	46	1955	47	30	1985**	56	1981**	2.25	1981
Nov 14	64	78	1995	48	1982	46	30	1916	57	1981	0.87	1934
Nov 15	64	80	1923	48	1994**	46	29	1880	59	1981	1.27	1934
Nov 16	63	76	1995**	46	1982**	46	32	1880	58	1981	1.95	1888
Nov 17	63	84	1932	48	1881	46	30	1958	56	1966**	3.02	1885
Nov 18	62	78	1932	52	1946	45	32	1921**	60	1996	2.20	1885
Nov 19	62	77	1932	47	1922	45	30	1985	58	1966	1.39	1966
Nov 20	61	78	1932	45	1985	45	30	1985	62	1950	1.33	1903
Nov 21	61	74	1936	49	1977	45	31	1985**	59	1903	2.32	1900
Nov 22	61	75	1959	48	1918**	44	30	1880	57	1996**	1.07	1978
Nov 23	60	80	1930	45	1985	44	28	1931	58	1981**	1.60	1896
Nov 24	60	73	1959	44	1985	44	30	1931	56	1909	2.27	1985
Nov 25	59	75	1995**	44	1908	44	30	1880	54	1970	1.09	1989
Nov 26	59	76	1923	46	1931	44	29	1883	55	1901	1.07	1997
Nov 27	59	72	1959	45	1960	43	28	1887**	53	1923**	1.19	1984
Nov 28	58	71	1932	45	1880	43	27	1880	58	1932	2.20	1970
Nov 29	58	71	1929	47	1967**	43	31	1952	56	1901	1.28	1970
Nov 30	58	71	1995	48	1919	43	30	1880	55	1926	3.26	1892

MONTHLY SUMMARY

Max Extreme 86 Nov 02 1966*	Min Extreme 27 Nov 28 1880
Low Max 44 Nov 25 1908*	High Min 62 Nov 20 1950
Average Max 64.2	Average Min 45.9 Average Temperature 55.1
Max Pcpn 3.26 Nov 30 1892	

*Also occurred prior dates in month

**Also occurred prior years

SACRAMENTO CLIMATE MONTH: DECEMBER

	Normal	Record	Record	Record		Normal	Record	Record	Record		Grtst	
	Max	Max	Max	Low	Low Max	Min	Min	Min	High	High Min	Greatest	Pcpn
			Year	Max	Year			Year	Min	Year	Pcpn	Year
Dec 01	57	71	1959	44	1972	42	32	2004**	54	1966	1.70	1952
Dec 02	57	69	1959	44	1972	42	30	1906	56	1941	2.05	1880
Dec 03	57	71	1958	43	1971	42	31	2004	55	1901	2.00	1890
Dec 04	56	71	1958	43	1909	42	29	1909	54	1995	1.41	1881
Dec 05	56	72	1979	44	1963	42	32	1972	55	1995	0.78	1889
Dec 06	56	70	1989	43	1948**	41	29	1891	55	1995	0.96	1950
Dec 07	56	68	1979**	42	1965	41	28	1891	53	1995**	1.32	1997
Dec 08	55	71	1888**	38	1972	41	27	1972	55	1950	1.23	1909
Dec 09	55	69	1893	37	1972	41	23	1932	58	1939	1.87	1954
Dec 10	55	68	1958	35	1932	41	22	1932	57	1937	1.92	1937
Dec 11	54	71	1958	34	1932	41	17	1932	54	1966**	2.27	1995
Dec 12	54	71	1958	38	1972	40	21	1932	57	1996	1.09	1922
Dec 13	54	71	1988	42	1961	40	23	1932	56	1929	1.73	1915
Dec 14	54	69	1958	32	1972	40	23	1940	56	1981	1.56	1929
Dec 15	54	72	1958	36	1972	40	26	1932	56	1929	1.18	1957
Dec 16	54	70	1958	40	1890	40	26	1892	54	1962	0.95	20021 957
Dec 17	53	69	1958	40	1890	40	28	1928	52	1877	1.33	1884
Dec 18	53	68	1958	40	1963	40	28	1924**	52	1884	1.40	1955
Dec 19	53	71	1999	37	1908	40	25	1924	54	1981	2.41	1955
Dec 20	53	66	1981	36	1908	40	27	1928	57	1969	1.32	1884
Dec 21	53	66	1999	34	1990	40	22	1990	57	1964	2.81	1885
Dec 22	53	67	1999	36	1928	39	18	1990	58	1964	1.94	1955
Dec 23	53	66	1964	32	1928	39	21	1990	58	1964	1.38	1884
Dec 24	53	66	1964**	38	1899	39	23	1990	56	1884	2.21	1983
Dec 25	53	64	1967	38	1992**	39	26	1891**	55	1964	2.42	1884
Dec 26	52	65	1967	37	1899	39	25	1879	55	1892**	1.58	1955
Dec 27	52	68	1953	37	1988	39	27	1879**	52	1945**	1.96	1931
Dec 28	52	72	1967	37	1899	39	26	1930	54	1973	1.25	1992
Dec 29	52	66	1989**	38	1908	39	24	1878	54	1996	1.47	1933
Dec 30	52	61	1999**	38	1929**	39	28	1990**	57	1996	1.32	1913
Dec 31	52	67	1996**	37	1882	39	24	1915	59	1996	3.34	1890

MONTHLY SUMMARY

Max Extreme 72	Dec 28 1967*	Min Extreme 17	Dec 11 1932
Low Max 32	Dec 23 1972*	High Min 59	Dec 31 1996
Average Max 55		Average Min 40.4	Average Temperature 47.7
Max Pcpn 3.34	Dec 31 1890		

*Also occurred prior dates in month

**Also occurred prior years

IV. TEMPERATURE RECORDS

**HIGHEST AND LOWEST AVERAGE MAXIMUM TEMPERATURE
BY MONTH AND YEAR OF OCCURRENCE**

(July 1877 - June 2005)

<u>Month</u>	<u>Normal* Monthly Maximum</u>	<u>Highest Average Maximum</u>	<u>Year</u>	<u>Lowest Average Maximum</u>	<u>Year</u>
January	55.1	62.1	1976	45.9	1937
February	62.2	68.1	1991	52.1	1887
March	67.0	75.4	2004	56.7	1897
April	73.9	80.8	1987	60.2	1967
May	81.6	91.7	2001	68.6	1915
June	88.8	94.6	1985	76.3	1884
July	93.8	99.6	1988	84.4	1903
August	92.5	97.8	1967	81.9	1899
September	88.6	94.0	1984	77.9	1930
October	79.2	84.8	1991	68.6	1882
November	64.2	72.7	1995	57.8	1882
December	55.0	63.0	1958	46.8	1924

**HIGHEST AND LOWEST AVERAGE MINIMUM TEMPERATURE
BY MONTH AND YEAR OF OCCURRENCE**

(July 1877 - June 2005)

<u>Month</u>	<u>Normal* Monthly Minimum</u>	<u>Highest Average Minimum</u>	<u>Year</u>	<u>Lowest Average Minimum</u>	<u>Year</u>
January	41.3	48.2	1995	30.4	1949
February	44.7	49.1	1963	36.4	1880
March	47.1	51.8	1993	38.9	1880
April	49.5	53.9	1926	42.3	1929
May	54.1	59.2	1997	47.2	1899
June	58.4	63.8	1981	52.1	1910
July	60.9	65.1	2003	54.3	1887
August	60.8	63.9	1998	53.5	1911
September	59.0	62.1	1997	52.0	1910
October	53.6	56.7	1992	46.2	1916
November	45.9	50.8	1981**	38.0	1880
December	40.4	46.6	1950	33.4	1932

- Climatological Normals from the years 1971-2000.
- ** Also occurred earlier years.

HIGHEST AND LOWEST MONTHLY AVERAGE TEMPERATURES

(July 1877 - June 2005)

	Normal*	<u>Highest Monthly Average Temperature</u>		<u>Lowest Monthly Average Temperature</u>	
		Temp	Year	Temp	Year
JANUARY	48.2	53.2	1995	38.7	1937
		52.6	1986	40.6	1922
		51.9	2003**	41.2	1929
		51.8	1953	41.8	1883
		51.7	1970	42.0	1926**
FEBRUARY	53.5	57.6	1991**	44.8	1887
		56.9	1992	45.5	1903
		56.0	1996	45.7	1880
		55.9	1986**	46.6	1949
		55.6	1981	46.9	1911
MARCH	57.1	62.5	2004	49.2	1880
		61.5	1934	49.4	1897
		61.1	1997	50.4	1935
		61.0	1993	50.8	1948**
		60.9	1986	50.9	1907
APRIL	61.7	65.9	1966	52.2	1967
		65.8	1992**	53.3	1896
		65.7	1990	54.0	1929
		64.7	1997	54.3	1912
		64.5	2004	54.7	1948
MAY	67.9	74.7	2001	59.3	1899
		74.5	1997	59.6	1933
		73.8	1992	59.8	1917**
		73.0	1984	60.0	1896
		71.6	1976	60.6	1953
JUNE	73.6	79.2	1981	64.7	1894
		77.5	1985	65.9	1923
		76.4	1974	66.2	1952
		76.1	2000	66.4	1910**
		76.0	1918	66.5	1906

* Monthly Normals based on Climatological Normals 1971-2000.

** Also occurred earlier years.

HIGHEST AND LOWEST MONTHLY AVERAGE TEMPERATURES

(July 1877 - June 2005)

	<u>Normal*</u>	<u>Highest Monthly Average Temperature</u>		<u>Lowest Monthly Average Temperature</u>	
		<u>Temp</u>	<u>Year</u>	<u>Temp</u>	<u>Year</u>
JULY	77.4	81.6	2003**	69.4	1903
		81.2	1996	70.2	1887
		80.7	1984	70.7	1907
		79.5	1931	71.0	1914
		79.2	2002	71.2	1904
AUGUST	76.7	80.7	1998	68.0	1899
		80.2	1996	68.8	1911
		79.9	1967	69.8	1887
		79.6	1969	70.2	1900
		79.4	1992	70.4	1881
SEPTEMBER	73.8	77.3	1979	65.4	1893
		77.2	1984	65.5	1911
		76.9	1991	65.6	1930
		76.8	1997	66.0	1907
		76.5	1974	66.4	1925
OCTOBER	66.4	70.7	1991	57.7	1881
		70.1	1976	58.2	1916
		69.5	1987**	58.6	1920
		69.0	1992**	58.8	1886**
		68.9	1990	59.0	1883
NOVEMBER	55.1	61.6	1995	49.4	1880
		59.2	1976	49.6	1882
		59.0	1932	49.8	1994
		58.7	1997	50.2	1881
		58.6	1926	50.4	2000**
DECEMBER	47.7	52.6	1958	41.5	1932
		52.4	1996	42.1	1908
		52.3	1995	42.2	1924
		51.3	1976	42.5	1963
		51.1	1969	42.6	1985

* Monthly Normals based on Climatological Normals 1971-2000.

** Also occurred earlier years.

**WARMEST AND COLDEST
SEASONAL TEMPERATURES**

(December 1877 - June 2005)

WINTER
(December - February)

Average = 49.8*

<u>Warmest</u>			<u>Coldest</u>	
<u>Temp</u>	<u>Year</u>		<u>Temp</u>	<u>Year</u>
52.7	1995-96		42.9	1948-49
52.6	1969-70		43.6	1932-33
52.4	1996-97		44.0	1936-37
52.2	1979-80		44.1	1879-80
52.1	1975-76		44.9	1928-29
51.7	2002-03		45.1	1909-10
51.7	1980-81		45.2	1954-55
51.4	1994-95		45.2	1882-83
51.2	1997-98		45.3	1902-03
51.1	1977-78		45.5	1916-17

SPRING
(March - May)

Average = 61.7*

<u>Warmest</u>			<u>Coldest</u>	
<u>Temp</u>	<u>Year</u>		<u>Temp</u>	<u>Year</u>
66.8	1997		55.4	1907
66.4	1992		55.5	1948
65.2	2004		56.1	1917
65.0	1984		56.2	1902
64.7	1934		56.2	1896
64.5	2001		56.4	1912
64.0	1996		56.7	1963
64.0	1987		57.0	1911
63.9	1966		57.1	1893
63.6	1931		57.2	1906

*Averages based on Climatological Normals 1971-2000

**WARMEST AND COLDEST
SEASONAL TEMPERATURES**

(December 1877 - June 2005)

SUMMER

(June - August)

Average = 75.9*

<u>Warmest</u>		<u>Coldest</u>	
<u>Temp</u>	<u>Year</u>	<u>Temp</u>	<u>Year</u>
79.0	1996	69.3	1907
77.8	1981	69.6	1911
77.7	2003	69.8	1914
77.5	1988	70.2	1910
77.4	1974	70.3	1887
77.1	2002	70.4	1899
77.0	1990	70.5	1905
77.0	1984	70.5	1881
76.9	1985	70.5	1880
76.7	1992	70.6	1909

FALL

(September - November)

Average = 65.1*

<u>Warmest</u>		<u>Coldest</u>	
<u>Temp</u>	<u>Year</u>	<u>Temp</u>	<u>Year</u>
68.5	1991	59.0	1881
68.3	1995	59.0	1920
68.2	1976	59.4	1882
67.2	1997	59.6	1916
66.9	1990	59.7	1893
66.7	1992	60.1	1886
66.7	1974	60.1	1931
66.6	1979	60.3	1880
66.5	1983	60.3	1911
66.4	1988	60.4	1897

*Averages based on Climatological Normals 1971-2000

HIGHEST AND LOWEST ANNUAL TEMPERATURE

(1878-2004)

Average Annual Temperature 63.3*

<u>Highest Annual Average Temp</u>	<u>Year</u>	<u>Lowest Annual Average Temp</u>	<u>Year</u>
65.6	1997	58.1	1880
65.3	1996	58.4	1911
65.1	1976	58.8	1893
64.8	1992	59.2	1902
64.7	1981	59.3	1912
64.5	1995	59.3	1919

*Averages based on Climatological Normals 1971-2000

**GREATEST NUMBER OF CONSECUTIVE DAYS WITH
MAXIMUM TEMPERATURES 90 DEGREES OR HIGHER**

(July 1877 – June 2005)

Days	Period	Year	Days	Period	Year
40	July 13 - August 21	1992	20	September 8-27	1899
35	July 24 - August 27	1967	19	August 2-20	1990
29	June 23 - July 21	2002	19	July 26 - August 13	1988
29	June 22 - July 20	1984	19	August 27 -September 14	1985
25	July 17 - August 10	1974	18	July 19 - August 5	1945
24	July 25 - August 17	1969	18	June 19 - July 6	1929
23	July 26 - August 17	1983	17	July 11 – July 27	2004
22	June 15 - July 6	1981	17	July 19 – August 4	1996
22	July 7-28	1961	17	June 6 - July 22	1990
21	July 12 - August 1	1988	17	July 17 – July 3	1988
21	July 29 - August 18	1971	17	July 29 - August 14	1986
21	July 29 - August 18	1920	17	July 26 – August 11	1978
20	July 15 - August 3	1959	17	July 1-17	1953
			17	July 9-25	1917

Only periods with 17 or more days tabulated.

**GREATEST NUMBER OF NON-CONSECUTIVE DAYS WITH MAXIMUM
TEMPERATURES 90 DEGREES OR HIGHER IN ONE MONTH**

(July 1877 – June 2005)

Days	Period	Days	Period
30	August 1967	27	July 1996
29	August 1994	27	August 1985
29	July 1988	27	August 1931
28	July 2003	27	July 1970
28	July 2002	27	July 1967
28	July 1997	27	August 1958
28	August 1969	26	August 1998
28	July 1969	26	August 1992
28	July 1967	26	July 1984
28	July 1953	26	July 1981
28	July 1945	26	August 1966

Only months with occurrences of 26 or more days tabulated.

**GREATEST NUMBER OF CONSECUTIVE DAYS WITH MAXIMUM
TEMPERATURES 100 DEGREES OR HIGHER**

(July 1877 - June 2005)

<u>Days</u>	<u>Period</u>	<u>Year</u>	<u>Days</u>	<u>Period</u>	<u>Year</u>
9	August 8-16	1996	6	July 14-19	1998
9	July 10-18	1984	6	August 15-20	1992
9	June 19-27	1981	6	July 30 - August 4	1986
9	August 1-9	1966	6	July 1-6	1985
8	August 27 - September 3	1998	6	August 28 - September 2	1976
8	August 4-11	1990	6	July 16-21	1960
8	June 9-16	1985	6	June 28 - July 3	1950
7	July 16-22	2003	6	September 5-10	1944
7	August 8-14	2002	6	August 3-8	1936
7	July 21-27	1980	6	September 19-24	1936
7	August 12-18	1967	6	September 4-9	1923
7	June 20-26	1929	6	June 15-20	1917
7	June 29 - July 5	1929	6	July 4-9	1905
7	August 10-16	1920	6	July 25-30	1898
6	August 1-6	1998	6	August 9-14	1898

Only occurrences of 6 or more days tabulated.

**GREATEST NUMBER OF NON-CONSECUTIVE DAYS WITH MAXIMUM
TEMPERATURES 100 DEGREES OR HIGHER IN ONE MONTH**

(July 1877 - June 2005)

<u>Days</u>	<u>Period</u>	<u>Days</u>	<u>Period</u>
17	July 2003	12	June 1981
17	July 1988	12	August 1967
16	August 1998	12	August 1966
16	July 1984	11	August 2002
16	July 1931	11	July 1980
15	August 1996	11	July 1979
14	July 1996	11	July 1933
14	August 1969	10	August 1988
13	August 1992	10	June 1985
13	July 1985	10	July 1936

Only occurrences of 10 more days tabulated.

**GREATEST NUMBER OF CONSECUTIVE DAYS WITH MAXIMUM
TEMPERATURES 105 DEGREES OR HIGHER**

(July 1877 - June 2005)

<u>Days</u>	<u>Period</u>	<u>Year</u>	<u>Days</u>	<u>Period</u>	<u>Year</u>
7	August 5-11	1990	3	July 25-27	1980
6	August 9-14	1996	3	August 30 - September 1	1976
6	June 11-16	1985	3	June 24-26	1925
5	August 11-16	1920	3	July 24-26	1975
4	August 9-12	2002	3	June 14-16	1961
4	August 31- September 3	1998	3	July 17-19	1961
4	July 16-19	1988	3	July 19-21	1960
4	July 1-4	1984	3	June 23-25	1957
4	July 12-15	1972	3	September 2-4	1955
4	June 29 - July 2	1950	3	August 18-20	1950
4	September 1-4	1950	3	July 27-29	1943
4	June 29 - July 2	1934	3	July 15-17	1935
4	August 10-13	1898	3	July 25-27	1933
3	August 3-5	1998	3	August 11-13	1933
3	July 2-4	1991	3	July 3-5	1931
3	July 8-10	1988	3	June 23-25	1929
3	September 3-5	1988	3	July 14-16	1926
3	August 7-9	1984	3	September 6-8	1923

Only periods with 3 or more days tabulated.

**GREATEST NUMBER OF NON-CONSECUTIVE DAYS WITH MAXIMUM
TEMPERATURES 105 DEGREES OR HIGHER IN ONE MONTH**

(July 1877 – June 2005)

<u>Days</u>	<u>Period</u>	<u>Days</u>	<u>Period</u>
10	July 1988	5	August 1966
7	August 1996	5	July 1961
7	August 1990	5	July 1933
7	July 1984	5	August 1923
7	July 1931	5	August 1920
6	July 2003	4	August 2002
6	August 1998	4	August 1978
6	July 1996	4	July 1972
6	July 1985	4	July 1960
6	June 1985	4	September 1950
6	June 1961	4	July 1935
5	August 1987	4	August 1913

Only months with 4 or more days tabulated.

**RECORD NUMBER OF DAYS PER YEAR WITH MAXIMUM
TEMPERATURES 90, 100 and 105 DEGREES OR HIGHER**
(July 1877 – June 2005)

<u>90 OR HIGHER¹</u>		<u>100 OR HIGHER²</u>		<u>105 OR HIGHER³</u>	
Days	Year	Days	Year	Days	Year
111	1984	41	1988	18	1988
106	2002	38	1984, 1996	15	1996
104	1992	34	2002	14	1984
104	1988, 1992	33	1987	13	1990, 1998
103	1974	31	2003	11	1985, 1961, 1950
101	1997	30	1936	9	1987, 1931, 2002
99	2001	27	1981	8	1933, 2003
96	1996	26	1985	6	1972, 1966, 1960, 1935, 1934
95	1967	24	1967, 1966	5	1995, 1981, 1978, 1976, 1936, 1929, 1925, 1923, 1891
94	1970, 2003	23	1976, 1969, 1950, 1931, 1929		
92	1981, 1966	22	1990, 1979, 1961		
91	1987	21	1995, 1992, 1970, 2001		
89	1991, 1990, 1969, 2004	20	1993, 1986, 1933, 1888		

¹
Only years with 89 or more days tabulated

² *Only years with 20 or more days tabulated*

³ *Only years with 5 or more days tabulated*

AVERAGE NUMBER DAYS PER MONTH/YEAR
WITH MAXIMUM TEMPERATURES
90, 100 AND 105 DEGREES OR HIGHER
(1971 - 2000)

<u>Month</u>	<u>90 or Above</u>	<u>100 or Above</u>	<u>105 or Above</u>
April	1	0	0
May	7	1	0
June	14	4	1
July	23	7	2
August	20	6	2
September	15	3	0
October	4	--	0
Annual Average	84 Days	22 Days	5 Days

– Less than one day

* Averages based on Climatological Normals 1971-2000

**GREATEST NUMBER OF CONSECUTIVE DAYS WITH MINIMUM
TEMPERATURES 32 DEGREES OR LOWER**

(December 1877 - June 2005)

<u>Days</u>	<u>Period</u>	<u>Days</u>	<u>Period</u>
13	December 20, 1990 - January 1, 1991	7	January 18-24, 1922
10	December 29, 1960 - January 7, 1961	7	January 5-11, 1913
10	December 21-30, 1930	6	December 20-25, 1998
10	December 15-24, 1928	6	December 29, 1959 - January 3, 1960
10	December 27, 1918 - January 5, 1919	6	January 2-7, 1950
9	December 15-23, 1965	6	January 6-11, 1937
9	December 25, 1962 - January 2, 1963	6	January 10-15, 1926
9	January 23-31, 1949	6	January 15-20, 1917
9	February 2-10, 1883	6	December 17-22, 1908
8	December 10-17, 1985	6	January 9-14, 1898
8	December 8-15, 1972	6	January 6-11, 1888
8	January 11-18, 1963	6	January 13-18, 1888
8	January 8-15, 1949	6	January 18-23, 1883
8	January 7-14, 1929	6	February 2-9, 1883
8	February 7-14, 1884	6	December 10-15, 1883
7	December 9-15, 1932	6	January 27 - February 1, 1880
7	January 1-7, 1924	6	December 14-19, 1878

Only periods with 6 or more days tabulated.

**GREATEST NUMBER OF NON-CONSECUTIVE DAYS WITH MINIMUM
TEMPERATURES 32 DEGREES OR LOWER IN ONE MONTH**

(July 1877 – June 2005)

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

Only months with occurrences of 11 or more days tabulated.

**NUMBER OF DAYS WITH TEMPERATURES 32 DEGREES
OR LOWER IN ONE YEAR
(1878-2004)**

Least Number of Days		Greatest Number of Days	
<u>Days</u>	<u>Year</u>	<u>Days</u>	<u>Year</u>
0	1885, 1904, 1934, 1976, 1981, 1983, 1995, 1996	39	1949
		27	1883, 1898
1	1881, 1892, 1900, 1907, 1966 1974, 1977, 1980, 1991, 1992. 1994, 1997	22	1947
		19	1985
		18	1880, 1963
2	1909, 1915, 1925, 1973, 1979, 1982, 1984, 1986, 2001	17	1962
		16	1922, 1987, 1989
		15	1878, 1929, 1950, 1956, 1990

**AVERAGE NUMBER DAYS PER MONTH/YEAR WITH MINIMUM
TEMPERATURES 32 DEGREES OR LOWER**

<u>Month</u>	<u>32 Degrees or Less</u>
January	1.4
February	0.4
March	--
April	0
October	0
November	0.2
December	2.7
Annual	4.7

-- Number of days greater than 0, but less than .05

*Averages based on Climatological Normals 1971-2000

FREEZE DATA
(January 1881 – June 2005)

Latest Date in Spring

March 27, 1898

Earliest Date in Fall

November 4, 1935

LONGEST FREEZE-FREE PERIODS

<u>Days</u>	<u>Period</u>
765	December 9, 1994 - January 13, 1997
743	December 15, 1980 - December 29, 1982
732	January 2, 1991 - January 2, 1993
720	January 1, 1983 - December 21, 1984
712	January 2, 1979 - December 13, 1980
689	February 11, 1933 - December 31, 1934

SHORTEST FREEZE-FREE PERIOD

<u>Days</u>	<u>Period</u>
241	March 28, 1898 - November 23, 1898

V. PRECIPITATION RECORDS

**MAXIMUM AND MINIMUM PRECIPITATION BY MONTH
WITH YEAR OF OCCURRENCE**

(July 1849-June 2005)

	Normal	Maximum Monthly <u>Precipitation</u> Amount	Year	Minimum Monthly <u>Precipitation</u> Amount	Year
JANUARY	4.18	15.04	1862	0.15	1889
		12.72	1911	0.23	1984
		12.35	1995	0.29	1920
		9.76	1896	0.37	1991**
		9.65	1909	0.45	1904
FEBRUARY	3.77	10.30	1986	0.04	1899
		9.43	1998	0.09	1896
		9.25	1940	0.12	1852
		9.13	1958	0.16	1913
		8.93	2000	0.19	1995**
MARCH	3.15	10.00	1850	0.03	1956
		8.45	1906	0.04	1898
		8.30	1983	0.05	1926
		8.14	1864	0.07	1894
		7.84	1995	0.08	1885
APRIL	1.17	14.20	1880	T*	1949**
		5.81	1935	0.03	1933
		5.34	1896	0.05	1931
		4.76	1941	0.06	1946**
		4.58	1942	0.08	1945**
MAY	0.60	3.25	1889	0.00	2001
		3.04	1998*	and 11 other years prior	
		2.88	1900		
		2.85	1883		
		2.75	1915		
JUNE	0.18	1.45	1884	0.00	2003
		1.10	1875	and many years prior	
		1.02	1929		
		0.85	1907		
		0.69	2005		

* T is less than 0.01 inch.

** Also occurred earlier years.

– Normals are based on the Climatological Normals 1971-2000.

**MAXIMUM AND MINIMUM PRECIPITATION BY MONTH
WITH YEAR OF OCCURRENCE**

(July 1849 - June 2005)

	Normal	Maximum Monthly Precipitation		Minimum Monthly Precipitation	
		Amount	Year	Amount	Year
JULY	0.05	0.90	1974	0.00	2003 and several years prior
		0.63	1860		
		0.55	1861		
		0.31	1980		
		0.22	1979		
AUGUST	0.05	0.67	1953	0.00	2002 and several years prior
		0.59	1965		
		0.57	1976		
		0.37	1989		
		0.35	1954		
SEPTEMBER	0.37	3.62	1904	0.00	2003 and several years prior
		3.58	1918		
		3.15	1989		
		1.93	2004		
		1.54	1982*		
OCTOBER	1.00	6.85	1962	0.00	2002 and several years prior
		6.02	1889		
		4.46	1899		
		3.45	1876		
		3.01	1858		
NOVEMBER	2.59	11.34	1885	0.00	1995 and 4 other years prior
		7.44	1970		
		7.13	1981		
		6.72	1864		
		6.69	1973		
DECEMBER	2.76	13.40	1852	0.00	1989**
		12.85	1867		
		12.50	1849		
		12.20	1955		
		11.81	1880		
				0.03	1999
				0.22	1956
				0.23	1912
				0.30	1975

* Also occurred earlier years.

– Normals are based on the Climatological Normals 1971-2000.

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.

MONTHLY, ACCUMULATIVE AND SEASON PRECIPITATION TOTALS
(Rainfall Season July 1 - June 30)

Season	Jul	Aug	Sep	Oct	Nov		Pcpn to Dec 31	Jan	Feb	Mar	Apr	May	Jun	Total Pcpn
Normal*	0.05	0.05	0.37	1.00	2.59	2.76	6.82	4.18	3.77	3.15	1.17	0.60	0.18	19.87
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	0.14	0.05	0.69	2.67	3.55	0.65	0.35	1.88	1.14	0.69	0.00	8.26
1851-52	0.00	0.00	1.00	0.18	2.14	7.07	10.39	0.58	0.12	6.40	0.19	0.30	0.00	17.98
1852-53	0.00	0.00	T	0.00	6.00	13.40	19.40	3.00	2.00	7.00	3.50	1.45	T	36.35
1853-54	T	0.00	T	T	1.50	1.54	3.04	3.25	8.50	3.25	1.50	0.21	0.31	20.06
1854-55	0.00	T	T	1.01	0.65	1.15	2.81	2.67	3.46	4.20	4.32	1.15	0.01	18.62
1855-56	0.00	0.00	T	0.00	0.75	2.00	2.75	4.92	0.69	1.40	2.13	1.84	0.03	13.76
1856-57	0.00	0.00	T	0.20	0.65	2.40	3.25	1.38	4.80	0.68	T	T	0.35	10.46
1857-58	0.00	T	0.00	0.66	2.41	2.63	5.70	2.44	2.46	2.88	1.21	0.20	0.10	14.99
1858-59	0.01	T	T	3.01	0.15	4.34	7.51	0.96	3.91	1.64	0.98	1.04	0.00	16.04
1859-60	0.00	0.00	0.02	0.00	6.48	1.83	8.33	2.31	0.93	5.11	2.87	2.49	0.02	22.06
1860-61	0.63	0.00	0.06	0.91	0.18	4.28	6.06	2.67	2.92	3.32	0.48	0.59	0.14	16.18
1861-62	0.55	0.00	0.00	T	2.17	8.64	11.36	15.04	4.26	2.80	0.82	1.81	0.01	36.10
1862-63	0.00	0.01	0.00	0.36	T	2.33	2.70	1.73	2.75	2.36	1.69	0.36	0.00	11.59
1863-64	0.00	0.00	T	0.00	1.49	1.82	3.31	1.08	0.19	1.30	1.08	0.74	0.09	7.79
1864-65	0.00	0.08	T	0.12	6.72	7.87	14.79	4.78	0.71	0.48	1.37	0.46	0.00	22.59
1865-66	T	0.00	0.08	0.48	2.43	0.36	3.35	7.70	2.01	2.02	0.48	2.25	0.10	17.91
1866-67	0.02	0.00	0.00	T	2.43	9.51	11.96	3.44	7.10	1.01	1.80	0.01	0.00	25.32
1867-68	0.00	0.00	0.01	0.00	3.81	12.85	16.67	6.04	3.15	4.35	2.31	0.27	T	32.79
1868-69	0.00	0.00	0.00	0.00	0.77	2.61	3.38	4.79	3.63	2.94	1.24	0.65	0.01	16.64
1869-70	0.00	0.00	T	2.12	0.85	1.96	4.93	1.37	3.24	1.64	2.12	0.27	T	13.57
1870-71	T	T	0.00	0.02	0.58	0.97	1.57	2.08	1.92	0.69	1.45	0.76	T	8.47
1871-72	0.00	0.00	T	0.21	1.22	10.59	12.02	4.04	4.74	1.94	0.61	0.28	0.02	23.65
1872-73	0.00	0.00	T	0.22	1.93	5.39	7.54	1.23	4.36	0.55	0.51	0.00	T	14.19
1873-74	0.02	T	0.00	0.31	1.21	10.01	11.55	5.20	1.86	3.05	0.89	0.37	T	22.92
1874-75	T	0.00	0.05	2.26	3.80	0.44	6.55	8.70	0.55	0.80	T	T	1.10	17.70
1875-76	0.00	0.00	0.00	0.44	6.20	5.52	12.16	4.99	3.75	4.15	1.10	0.15	0.00	26.30
1876-77	0.21	0.02	T	3.45	0.30	0.00	3.98	2.77	1.04	0.56	0.19	0.64	0.01	9.19
1877-78	0.00	0.00	0.00	0.73	1.07	1.43	3.23	9.26	8.04	3.09	1.07	0.17	0.00	24.86
1878-79	0.00	0.00	0.29	0.55	0.51	0.47	1.82	3.18	3.88	4.88	2.66	1.30	0.13	17.85
1879-80	T	T	0.00	0.88	2.05	3.41	6.34	1.64	1.83	1.70	14.20	0.76	0.00	26.47

*Normal precipitation is for the period 1971-2000.

MONTHLY, ACCUMULATIVE AND SEASON PRECIPITATION TOTALS
(Rainfall Season July 1 - June 30)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Pcpn to Dec 31	Jan	Feb	Mar	Apr	May	Jun	Total Pcpn
Normal*	0.05	0.05	0.37	1.00	2.59	2.76	6.82	4.18	3.77	3.15	1.17	0.60	0.18	19.87
1880-81	T	0.00	0.00	0.00	0.05	11.81	11.86	6.14	5.06	1.37	1.64	T	0.50	26.57
1881-82	T	0.00	0.30	0.55	1.88	3.27	6.00	1.89	2.40	3.78	1.99	0.35	0.10	16.51
1882-83	T	0.00	0.57	2.63	3.22	1.13	7.55	2.23	1.11	3.70	0.67	2.85	0.00	18.11
1883-84	0.00	0.00	0.90	0.97	0.61	0.44	2.92	3.43	4.46	8.14	4.42	0.06	1.45	24.78
1884-85	0.00	T	0.60	2.01	0.00	10.45	13.06	2.16	0.49	0.08	0.68	T	0.11	16.58
1885-86	T	0.00	0.08	0.02	11.34	5.76	17.20	7.95	0.29	2.68	4.08	0.07	0.00	32.27
1886-87	0.00	0.00	0.00	0.68	0.21	2.21	3.10	1.12	6.28	0.94	2.53	0.00	0.00	13.97
1887-88	0.00	T	0.02	0.00	0.45	2.09	2.56	4.81	0.57	3.04	0.10	0.40	0.08	11.56
1888-89	T	T	0.55	0.00	4.28	4.63	9.46	0.15	0.33	6.25	0.26	3.25	0.25	19.95
1889-90	0.00	0.00	0.00	6.02	3.15	7.82	16.99	6.62	4.06	3.00	1.33	1.80	0.00	33.80
1890-91	0.00	T	0.80	T	0.00	3.34	4.14	0.53	6.61	1.78	2.04	0.66	0.05	15.81
1891-92	T	0.00	0.10	0.10	0.48	3.28	3.96	1.78	2.84	3.02	1.20	2.38	T	15.18
1892-93	0.00	0.00	0.18	0.70	6.60	4.90	12.38	3.27	2.66	3.51	1.08	1.05	0.00	23.95
1893-94	T	0.00	0.22	0.12	2.92	1.76	5.02	4.17	3.92	0.74	0.34	1.70	0.46	16.35
1894-95	T	T	0.88	1.06	0.48	8.86	11.28	8.42	1.84	1.20	0.86	0.51	0.00	24.11
1895-96	0.04	T	1.26	0.17	1.54	1.54	4.55	9.79	0.09	2.57	5.34	0.92	0.00	23.23
1896-97	T	0.20	0.31	0.55	3.56	1.76	6.38	3.66	4.15	2.54	0.25	0.30	0.04	17.32
1897-98	0.00	0.01	0.16	1.96	0.61	1.64	4.38	0.98	3.19	0.04	0.28	1.50	0.14	10.51
1898-99	0.00	0.00	0.36	0.64	0.61	2.30	3.91	3.94	0.04	6.02	0.10	0.54	0.49	15.04
1899-00	0.00	0.02	0.00	4.46	2.62	2.91	10.01	3.54	0.32	1.61	1.88	2.88	0.00	20.24
1900-01	T	0.00	0.06	1.74	4.50	1.38	7.68	3.70	5.32	0.48	2.23	0.80	0.00	20.21
1901-02	T	T	0.56	1.56	2.68	1.19	5.99	0.95	6.52	1.99	1.36	0.45	0.01	17.27
1902-03	0.00	T	0.00	1.67	2.02	2.91	6.60	3.05	1.70	4.81	0.46	T	T	16.62
1903-04	0.00	0.00	0.00	0.12	3.44	1.12	4.68	0.45	5.26	5.43	1.02	0.03	T	16.87
1904-05	T	0.07	3.62	1.86	2.05	1.20	8.80	3.33	2.47	3.75	1.18	2.45	0.00	21.98
1905-06	0.00	T	0.03	0.00	1.20	0.56	1.79	6.63	3.02	8.45	1.21	2.24	0.59	23.93
1906-07	0.00	T	0.20	T	0.99	7.37	8.56	4.63	2.37	7.28	0.25	0.10	0.85	24.04
1907-08	0.00	0.00	T	1.20	0.04	3.33	4.57	3.84	2.75	0.42	0.08	0.54	T	12.20
1908-09	T	0.00	0.05	0.26	1.23	2.04	3.58	9.65	6.68	1.84	T	T	0.03	21.78
1909-10	0.00	0.00	0.21	1.27	1.32	3.87	6.67	1.48	0.83	3.06	0.11	0.03	T	12.18

*Normal precipitation is for the period 1971-2000.

MONTHLY, ACCUMULATIVE AND SEASON PRECIPITATION TOTALS
(Rainfall Season July 1 -June 30)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Pcprn to Dec 31	Jan	Feb	Mar	Apr	May	Jun	Total Pcprn
Normal*	0.05	0.05	0.37	1.00	2.59	2.76	6.82	4.18	3.77	3.15	1.17	0.60	0.18	19.87
1910-11	T	0.00	0.20	0.28	0.17	1.62	2.27	12.72	1.88	4.30	0.66	0.03	0.12	21.98
1911-12	0.00	0.00	T	0.18	0.15	1.07	1.40	2.74	0.23	1.97	1.69	0.94	0.58	9.55
1912-13	T	0.00	1.25	0.58	0.80	0.23	2.86	2.52	0.16	1.34	0.53	0.51	0.11	8.03
1913-14	T	0.01	T	0.13	4.58	4.40	9.12	5.97	2.96	0.59	0.70	0.50	0.60	20.44
1914-15	0.00	0.00	T	0.82	0.47	3.44	4.73	3.76	4.26	1.20	0.50	2.75	0.00	17.20
1915-16	T	0.01	T	T	0.83	4.42	5.26	9.35	2.45	1.06	0.06	0.10	0.01	18.29
1916-17	0.07	T	0.16	0.79	0.49	3.73	5.24	1.30	4.97	0.70	0.62	0.12	0.00	12.95
1917-18	T	T	0.51	T	0.25	0.45	1.21	0.97	3.36	4.00	1.06	0.01	T	10.61
1918-19	0.00	T	3.58	0.40	1.84	1.70	7.52	1.77	6.29	1.50	0.11	0.01	0.00	17.20
1919-20	T	T	0.53	0.01	0.36	2.22	3.12	0.29	0.81	3.27	1.36	0.00	0.05	8.90
1920-21	0.00	T	0.01	1.29	3.39	4.32	9.01	4.61	0.54	1.45	0.39	0.75	0.05	16.80
1921-22	0.00	0.00	T	0.80	1.09	3.81	5.70	2.16	4.18	1.29	0.40	0.43	T	14.16
1922-23	T	T	0.00	0.72	3.03	6.12	9.87	2.05	0.30	0.43	2.87	0.08	0.09	15.69
1923-24	0.00	T	0.50	0.58	0.62	0.94	2.64	1.80	2.00	1.19	0.30	0.06	0.00	7.99
1924-25	T	T	T	2.10	1.59	3.63	7.32	1.02	4.45	1.14	1.61	2.11	0.05	17.70
1925-26	0.01	0.01	0.02	T	1.13	1.50	2.67	3.20	5.52	0.05	4.25	0.36	0.00	16.05
1926-27	0.00	T	T	2.14	4.48	0.58	7.20	2.30	4.99	1.01	1.47	0.21	0.57	17.75
1927-28	0.00	T	0.01	1.45	1.81	1.55	4.82	1.17	1.38	3.39	0.78	0.02	0.04	11.60
1928-29	T	0.00	T	0.15	2.98	2.66	5.79	0.88	1.44	0.78	0.44	0.04	1.02	10.39
1929-30	T	0.00	0.00	0.15	0.00	4.06	4.21	3.65	1.62	2.86	0.94	0.34	T	13.62
1930-31	0.00	T	0.29	0.47	1.11	0.56	2.43	2.50	1.35	1.14	0.05	0.67	0.29	8.43
1931-32	T	T	T	0.18	1.30	6.84	8.32	1.09	1.76	0.34	0.76	0.30	T	12.57
1932-33	T	0.00	0.00	0.00	0.36	2.11	2.47	2.85	0.95	1.44	0.03	0.30	0.08	8.12
1933-34	T	0.00	0.03	0.66	0.00	5.74	6.43	1.33	2.97	0.13	0.16	0.26	0.30	11.58
1934-35	0.00	T	0.01	0.45	2.61	2.50	5.57	4.81	1.97	2.93	5.81	0.01	0.00	21.10
1935-36	T	T	T	1.22	0.77	2.18	4.17	3.80	8.59	1.33	1.69	0.68	0.27	20.53
1936-37	T	0.00	T	0.35	0.03	2.62	3.00	2.92	6.18	6.37	1.10	0.01	0.18	19.76
1937-38	T	0.00	0.00	0.87	2.69	4.06	7.62	3.50	8.24	3.92	1.51	0.04	T	24.83
1938-39	T	0.00	0.30	1.29	0.88	0.71	3.18	1.91	1.06	2.42	0.25	0.92	T	9.74
1939-40	T	0.00	0.35	0.45	0.07	1.15	2.02	7.98	9.25	4.22	0.68	0.92	T	25.07

*Normal precipitation is for the period 1971-2000.

MONTHLY, ACCUMULATIVE AND SEASON PRECIPITATION TOTALS
(Rainfall Season July 1 - June 30)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Pcpn to Dec 31	Jan	Feb	Mar	Apr	May	Jun	Total Pcpn
Normal*	0.05	0.05	0.37	1.00	2.59	2.76	6.82	4.18	3.77	3.15	1.17	0.60	0.18	19.87
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	T	T	0.86	1.17	6.29	8.32	4.68	2.98	3.31	4.58	1.07	0.00	24.94
1942-43	T	0.00	0.03	0.27	2.22	3.16	5.68	7.04	1.26	3.60	1.91	0.14	0.35	19.98
1943-44	T	0.00	T	0.16	0.62	2.02	2.80	3.08	7.27	1.42	1.66	0.83	0.52	17.58
1944-45	0.00	0.00	T	1.39	3.54	2.31	7.24	1.82	4.49	2.83	0.08	0.55	0.05	17.06
1945-46	T	T	0.00	2.53	1.60	5.50	9.63	0.77	0.90	1.94	0.06	0.61	0.00	13.91
1946-47	T	0.00	0.04	0.75	2.42	1.56	4.77	0.60	2.34	3.28	0.15	0.17	0.28	11.59
1947-48	0.00	0.00	T	2.60	1.02	0.65	4.27	0.51	0.88	3.68	3.05	3.04	0.01	15.44
1948-49	0.00	0.00	0.10	1.45	0.59	4.88	7.02	1.47	1.91	4.15	T	0.32	T	14.87
1949-50	T	0.01	0.03	0.14	1.10	1.90	3.18	4.41	3.27	2.00	1.03	0.37	0.05	14.31
1950-51	T	0.00	0.62	2.35	5.50	4.72	13.19	2.45	1.57	0.84	0.85	0.64	T	19.54
1951-52	0.00	T	0.25	1.33	3.18	5.11	9.87	8.65	1.65	4.50	1.41	0.05	0.45	26.58
1952-53	0.01	0.00	0.05	0.00	2.04	7.27	9.37	3.51	0.21	1.42	2.69	0.52	0.61	18.33
1953-54	0.00	0.67	0.00	0.18	1.79	0.56	3.20	3.26	3.70	3.29	1.88	0.21	T	15.54
1954-55	0.00	0.35	0.00	0.02	3.35	4.93	8.65	3.14	1.33	0.37	2.75	0.67	0.01	16.92
1955-56	0.00	0.00	0.95	0.57	1.16	12.20	14.88	7.58	2.43	0.03	1.86	0.96	T	27.74
1956-57	0.00	0.00	0.84	1.32	0.06	0.22	2.44	2.47	4.18	2.23	1.66	1.78	T	14.76
1957-58	0.00	0.00	1.35	1.35	0.33	3.07	6.10	5.38	9.13	5.93	4.41	0.72	0.27	31.94
1958-59	0.00	0.02	0.12	0.42	0.16	0.72	1.44	4.62	3.64	0.46	0.30	T	0.00	10.46
1959-60	T	T	1.54	T	0.01	1.28	2.83	3.25	2.91	1.62	1.26	0.41	0.00	12.28
1960-61	T	0.00	T	T	4.38	0.70	5.08	3.11	1.19	2.02	0.49	0.13	0.02	12.04
1961-62	T	0.01	0.17	0.03	2.96	1.44	4.61	0.95	7.60	1.84	0.19	0.06	0.01	15.26
1962-63	0.00	0.13	0.11	6.85	0.40	1.74	9.23	3.65	1.75	3.56	3.43	0.64	0.02	22.28
1963-64	0.00	T	0.35	1.27	3.92	0.38	5.92	3.35	0.19	0.83	0.16	0.18	0.41	11.04
1964-65	0.01	0.06	0.00	1.55	2.64	5.69	9.95	3.66	0.48	1.61	2.97	0.07	T	18.74
1965-66	0.00	0.59	0.00	0.11	3.25	2.89	6.84	2.11	1.58	0.22	0.59	0.24	T	11.58
1966-67	0.09	0.00	0.05	0.00	5.48	3.33	8.95	7.94	0.40	4.15	3.85	0.12	0.68	26.09
1967-68	0.00	0.00	0.04	0.26	1.25	0.94	2.49	3.34	1.97	2.42	0.40	0.32	0.23	11.17
1968-69	0.00	0.08	0.00	0.68	2.74	3.10	6.60	8.90	7.61	1.13	1.32	0.09	0.01	25.66
1969-70	0.00	0.00	0.03	0.80	0.81	5.36	7.00	7.05	1.45	1.83	0.14	0.00	0.24	17.71

*Normal precipitation is for the period 1971-2000.

MONTHLY, ACCUMULATIVE AND SEASON PRECIPITATION TOTALS
(Rainfall Season July 1 - June 30)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Pcpn to Dec 31	Jan	Feb	Mar	Apr	May	Jun	Total Pcpn
Normal*	0.05	0.05	0.37	1.00	2.59	2.76	6.82	4.18	3.77	3.15	1.17	0.60	0.18	19.87
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	0.70	1.38	6.73	0.39	0.04	0.26	15.13
1989-90	0.00	0.37	3.15	1.47	1.26	0.00	6.25	5.49	3.14	1.16	0.75	2.61	0.00	19.40
1990-91	0.00	0.00	0.00	0.28	0.56	1.66	2.50	0.37	3.18	7.48	0.38	0.26	0.56	14.73
1991-92	0.00	0.01	0.05	1.22	0.32	2.04	3.64	1.68	6.89	3.32	0.93	0.00	0.22	16.68
1992-93	0.00	0.00	0.00	1.26	0.38	6.23	7.87	9.37	5.11	2.43	0.75	1.23	0.94	27.70
1993-94	0.00	0.00	0.00	0.43	2.70	2.04	5.17	2.16	3.17	0.07	0.80	1.65	0.00	13.02
1994-95	0.00	0.00	0.00	0.45	3.96	3.54	7.95	12.35	0.19	7.84	1.90	1.01	0.53	31.77
1995-96	0.01	0.00	0.00	0.00	0.00	5.14	5.15	3.30	6.09	2.30	1.93	2.22	0.00	20.99
1996-97	0.00	0.00	0.00	0.76	1.49	5.82	8.07	7.68	0.26	0.58	0.28	0.35	0.53	17.75
1997-98	0.00	0.21	0.18	1.01	4.67	2.64	8.71	6.79	9.43	2.55	1.44	3.04	0.29	32.25
1998-99	0.00	0.00	0.30	0.81	3.60	0.65	5.36	2.86	4.54	1.46	0.94	0.08	0.03	15.27
1999-00	0.00	0.00	0.00	0.13	1.75	0.03	1.91	7.20	8.93	2.26	2.05	1.36	0.03	23.74

*Normal precipitation is for the period 1971-2000.

MONTHLY, ACCUMULATIVE AND SEASON PRECIPITATION TOTALS
(Rainfall Season July 1 - June 30)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Pcpc to Dec 31	Jan	Feb	Mar	Apr	May	Jun	Total Pcpn
Normal*	0.05	0.05	0.37	1.00	2.59	2.76	6.82	4.18	3.77	3.15	1.17	0.60	0.18	19.87
2000-01	0.00	0.00	0.17	2.57	0.75	0.55	4.04	4.48	4.79	2.15	1.70	0.00	0.14	17.31
2001-02	0.00	0.00	0.33	0.35	2.33	5.99	9.00	2.23	1.04	2.85	0.15	1.81	0.00	17.08
2002-03	0.00	0.00	0.00	0.00	2.00	5.85	7.85	1.13	1.08	1.95	2.75	1.23	0.00	15.99
2003-04	0.00	0.34	0.00	0.27	1.64	4.35	6.60	2.07	4.84	0.49	0.11	0.08	0.00	14.19
2004-05	0.00	0.00	1.93	3.09	2.77	4.13	11.92	3.69	2.52	3.55	0.86	1.31	0.69	24.53

*Normal precipitation is for the period 1971-2000.

**NUMBER OF DAYS IN MONTH/SEASON WITH MEASURABLE
PRECIPITATION AND WATER YEAR TOTALS**

(July 1877- June 2005)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	# of <u>Days</u>	Total <u>Rain</u> **
Average*	--	1	2	4	8	9	11	9	10	5	3	1	63	19.87
1877-78	0	0	0	5	7	5	17	17	14	3	4	0	72	24.86
1878-79	0	0	3	1	2	3	11	9	15	12	5	1	62	17.86
1879-80	0	0	0	4	8	12	7	10	7	15	3	0	66	26.47
1880-81	0	0	0	0	2	21	9	13	6	6	0	2	59	26.57
1881-82	0	0	1	6	4	11	8	6	10	8	1	1	56	16.51
1882-83	0	0	2	6	7	9	5	3	6	7	9	0	54	18.11
1883-84	0	0	2	6	3	6	9	10	13	9	3	7	68	24.78
1884-85	0	0	3	4	0	11	8	5	2	7	0	2	42	16.58
1885-86	0	0	1	2	17	10	13	3	12	12	2	0	72	32.27
1886-87	0	0	0	3	1	7	7	14	5	8	0	0	45	13.97
1887-88	0	0	1	0	3	8	14	5	8	2	2	4	47	11.56
1888-89	0	0	2	0	7	15	3	4	13	6	8	1	59	19.95
1889-90	0	0	0	11	7	23	17	9	14	4	5	0	90	33.80
1890-91	0	0	1	0	0	5	5	13	10	8	4	1	47	15.81
1891-92	0	0	3	2	4	11	5	7	9	7	7	0	55	15.18
1892-93	0	0	2	4	7	9	5	7	13	4	4	0	55	23.95
1893-94	0	0	2	1	7	6	8	9	7	2	7	2	51	16.35
1894-95	0	0	2	5	1	20	15	4	6	4	4	0	61	24.11
1895-96	1	0	4	3	7	8	13	2	13	10	6	0	67	23.23
1896-97	0	1	3	2	8	10	10	13	13	2	1	1	64	17.32
1897-98	0	1	1	4	4	6	6	9	1	2	5	1	40	10.51
1898-99	0	0	1	3	4	4	12	1	11	2	3	2	43	15.04
1899-00	0	1	0	9	13	10	11	4	9	8	4	0	69	20.24
1900-01	0	0	1	7	9	7	13	10	2	4	6	0	59	20.21
1901-02	0	0	1	3	9	4	7	19	8	7	4	1	63	17.27
1902-03	0	0	0	4	7	5	10	7	14	5	0	0	52	16.62
1903-04	0	0	0	1	9	5	6	16	19	10	1	0	67	16.87
1904-05	0	0	5	7	4	8	13	7	13	4	6	0	67	21.98
1905-06	0	0	1	0	3	7	11	14	17	6	6	5	70	23.93
1906-07	0	0	2	0	5	13	17	9	19	4	2	2	73	24.04
1907-08	0	2	0	4	1	12	14	9	3	3	5	0	53	12.20
1908-09	0	0	1	3	4	12	25	17	11	0	0	1	74	21.78
1909-10	0	0	3	5	14	13	12	9	8	1	1	0	66	12.18

– Less than one day.

* Averages based on Climatological Normals 1971-2000

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

**NUMBER OF DAYS IN MONTH/SEASON WITH MEASURABLE
PRECIPITATION AND WATER YEAR TOTALS**

(July 1877- June 2005)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	# of <u>Days</u>	Total <u>Rain</u> **
Average*	--	1	2	4	8	9	11	9	10	5	3	1	63	19.87
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

– Less than one day.

* Averages based on Climatological Normals 1971-2000

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

NUMBER OF DAYS IN MONTH/SEASON WITH MEASURABLE

PRECIPITATION AND WATER YEAR TOTALS
(July 1877- June 2005)

Year	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	# of <u>Days</u>	Total <u>Rain**</u>
Average*	--	1	2	4	8	9	11	9	10	5	3	1	63	19.87
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

– Less than one day.

* Averages based on Climatological Normals 1971-2000

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

**NUMBER OF DAYS IN MONTH/SEASON WITH MEASURABLE
PRECIPITATION AND WATER YEAR TOTALS**
(July 1877- June 2005)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	# of Days	Total Rain**
Average*	--	1	2	4	8	9	11	9	10	5	3	1	63	19.87
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	7.53
1977-78	1	0	4	4	3	14	16	9	11	9	0	0	71	25.36
1978-79	0	0	3	1	7	4	13	11	9	6	2	0	56	19.39
1979-80	1	0	1	6	7	8	13	13	7	5	2	1	63	24.79
1980-81	2	0	0	1	4	6	14	11	9	2	1	0	50	13.43
1981-82	0	0	1	7	12	13	10	4	15	8	0	2	72	32.65
1982-83	0	0	8	8	14	11	13	13	19	11	1	2	100	37.49
1983-84	0	1	3	4	14	17	4	9	4	4	1	2	63	17.40
1984-85	0	1	1	7	17	7	6	2	10	2	1	2	56	15.22
1985-86	0	1	4	2	12	9	15	12	8	5	3	0	71	29.75
1986-87	0	0	5	3	1	7	8	8	11	1	1	0	45	12.81
1987-88	0	0	0	6	8	15	12	2	1	5	3	3	55	15.37
1988-89	1	0	0	2	9	12	7	8	19	4	1	2	65	15.13
1989-90	0	2	5	4	2	0	11	7	5	3	8	0	47	19.40
1990-91	0	0	0	2	3	3	3	5	16	5	3	1	41	14.73
1991-92	0	1	1	2	2	7	9	17	11	2	0	2	54	16.68
1992-93	0	0	0	4	5	14	14	14	12	4	6	4	77	27.70
1993-94	0	0	0	5	7	7	8	9	1	4	4	0	45	13.02
1994-95	0	0	0	1	9	13	25	4	18	13	6	3	92	31.77
1995-96	1	0	0	0	0	13	14	15	7	5	5	0	60	20.99
1996-97	0	0	0	5	8	18	11	4	3	3	1	2	55	17.75
1997-98	0	2	1	4	13	5	20	20	12	8	14	3	102	32.25
1998-99	0	0	3	3	14	5	12	13	10	5	2	2	69	15.27
1999-00	0	0	0	1	8	2	12	17	8	4	6	1	59	23.74

– Less than one day.

* Averages based on Climatological Normals 1971-2000

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

**NUMBER OF DAYS IN MONTH/SEASON WITH MEASURABLE
PRECIPITATION AND TOTAL FOR WATER YEAR**
(July 1877- June 2005)

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	# of <u>Days</u>	Total <u>Rain</u> **
Average*	--	1	2	4	8	9	11	9	10	5	3	1	63	19.87
2000-01	0	0	2	9	3	5	7	12	7	4	0	2	51	17.31
2001-02	0	0	1	1	9	17	8	6	9	3	3	0	57	17.08
2002-03	0	0	0	0	5	16	10	6	6	12	3	0	58	15.99
2003-04	0	3	0	1	10	15	13	12	2	5	2	0	63	14.19
2004-05	0	0	1	6	6	10	14	10	11	5	6	3	72	24.53

– Less than one day.

* Averages based on Climatological Normals 1971-2000

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

RAINFALL DATA -- EXCESSIVE STORMS*

(January 1903 - June 2005)

TOTAL PRECIPITATION BY TIME PERIOD

Year	Month	<u>48 Hours</u>		<u>24 Hours</u>		<u>2 Hours</u>		<u>1 Hour</u>	
		Date	Total	Date	Total	Date	Total	Date	Total
1962	October	12-13	6.42	12-13	5.07	13	0.85	12	0.57
1986	February	16-17	5.05	16-17	3.54	17	0.72	17	0.40
1986	February	17-18	5.01	17	3.21	18	1.01	18	0.52
1995	January	09-10	4.55	09-10	4.47	09	1.74	09	1.44
1943	January	20-21	4.29	20-21	3.52	20	1.09	20	0.63
2000	January	23-24	4.26	23-24	3.51	24	0.47	23	0.27
1981	November	12-13	4.09	12-13	2.61	13	0.57	12	0.32
1967	January	20-21	4.09	20-21	3.12	21	0.86	21	0.61
1982	January	3-5	4.00	4-5	3.50	5	0.45	4	0.25
1936	February	11-12	3.89	11	2.34	12	0.85	12	0.77
1935	December	18-19	3.81	18-19	3.28	18	0.59	18	0.31
1937	December	9-11	3.67	9-10	2.22	11	0.52	10	0.39
1940	February	26-27	3.65	26-27	3.32	27	0.53	27	0.28
1944	February	2-3	3.56	2-3	2.82	2	0.39	2	0.20
1911	January	13-14	3.53	13-14	3.31	14	0.38	14	0.21
1958	April	1-2	3.48	1-2	2.24	2	0.85	2	0.74
1970	November	28-29	3.48	28-29	2.45	28	0.54	28	0.30
1962	February	9-10	3.45	9-10	2.21	9	0.82	9	0.52
1916	January	2-3	3.41	2-3	3.21	3	0.74	3	0.36
1935	April	7	3.35	7	3.35	7	2.62	7	1.65
1955	December	22-23	3.25	22-23	2.36	22	0.58	22	0.38
1983	December	24-25	3.24	24-25	2.85	25	0.45	25	0.27
1931	December	26-27	3.23	26-27	2.98	26	0.38	26	0.20
1940	December	21-22	3.22	21	2.38	21	0.55	21	0.32
1918	September	12-13	3.17	12-13	3.14	12	0.72	12	0.38
1990	January	12-13	2.93	12-13	2.73	12	1.41	12	0.86
1958	February	18-19	2.93	18-19	2.66	18	0.39	18	0.22
1964	December	21-22	2.92	21-22	1.89	22	0.40	22	0.23
1952	January	11-12	2.90	11-12	2.73	12	0.43	11	0.33
1964	January	20-21	2.86	20-21	2.30	20	0.83	20	0.49
1983	March	12-13	2.78	12-13	2.63	13	0.66	13	0.52
1978	January	13-14	2.65	13-14	1.98	13	0.61	13	0.43
1973	February	26-27	2.62	27	2.11	27	1.19	27	1.01
1950	November	17-18	2.58	17-18	2.08	18	0.48	18	0.29

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

RAINFALL DATA – EXCESSIVE STORMS

MAXIMUM PRECIPITATION BY TIME PERIOD*

	(January 1903 - December 1995)			(January 1903 - June 2005)		
	<u>5 Minutes</u>	<u>10 Minutes</u>	<u>30 Minutes</u>	<u>1 Hour</u>	<u>2 Hours</u>	<u>24 Hours</u>
January	0.38 09/1995	0.59 09/1995	1.27 09/1995	1.44 09/1995	1.71 09/1995	4.47 09-10/1995
February	0.29 27/1973	0.53 27/1973	0.90 27/1973	1.01 27/1973	1.19 27/1973	3.54 16-17/1986
March	0.37 02/1995	0.50 02/1995	0.80 30/1906	0.94 30/1906	1.01 30/1906	2.94 08-09/1884
April	0.39 07/1935	0.62 07/1935	0.97 07/1935	1.65 07/1935	2.62 07/1935	7.24 20-21/1880
May	0.24 13/1941	0.27 13/1941	0.29 11/1915	0.54 17/2000	0.59 07/1905	1.94 05/1889
June	0.17 04/1993	0.19 04/1993	0.27 19/1974	0.45 04/1993	0.66 04/1993	0.84 03-04/1993
July	0.02 02/1980	0.04 02/1980	0.09 08/1974	0.13 08/1974	0.24 08/1974	0.89 07-08/1974
August	0.04 08/1962	0.06 15/1976**	0.13 15/1976	0.20 25-26/1954	0.30 25-26/1954	0.67 29/1953
September	0.23 23/1904	0.33 23/1904	0.69 23/1904	1.19 19/2004	1.93 19/2004	3.14 11-12/1918
October	0.36 26/1950	0.52 26/1921	0.66 26/1921	0.69 23/1987	0.85 13/1962	5.07 12-13/1962
November	0.29 13/1983	0.39 13/1983	0.55 13/1983	0.65** 13/1983	0.85 14-15/1934	4.29 17-18/1885
December	0.27 01/1951	0.36 01/1951	0.55 01/1951	0.69 01/1951	0.87 01/1951	3.27 18-19/1955
Annual	0.39 April 7 1935	0.62 April 7 1935	1.27 January 9 1995	1.65 April 7 1935	2.62 April 7 1935	7.24 April 20-21, 1880

* Any 24-hour period (not confined from midnight-midnight).

** Also occurred earlier years.

**GREATEST NUMBER OF DAYS WITH 0.01 INCH AND 0.10 INCH
OR MORE BY MONTH AND YEAR OF OCCURRENCE**

(July 1877 - June 2005)

Month	<u>0.01 Inch or More</u>			<u>0.10 Inch or More</u>		
	Average* # of Days	Greatest # of Days	Year	Average* # of Days	Greatest # of Days	Year
January	11	25	1995**	7	20	1909
February	9	20	1998	7	15	1936
March	10	19	1989**	7	16	1983
April	5	16	1948	3	13	1948
May	3	14	1998	1	7	1998**
June	1	7	1884	--	4	1884
July	--	3	1974	--	1	1980**
August	1	5	1976	--	3	1976
September	2	8	1982	1	5	1982
October	4	11	1889	2	10	1889
November	8	17	1984**	5	14	1984
December	9	23	1889	5	18	1889
Annual	63	102	1998	38	69	1983

**GREATEST NUMBER OF DAYS WITH 0.50 INCH AND 1.00 INCH
OR MORE BY MONTH AND YEAR OF OCCURRENCE**

(July 1877 - June 2005)

Month	<u>0.50 INCH OR MORE</u>			<u>1.00 INCH OR MORE</u>		
	Average* # of Days	Greatest # of Days	Year	Average* # of Days	Greatest # of Days	Year
January	3	11	1911	1	5	1993**
February	3	9	1878	1	5	1958
March	2	8	1991**	1	3	1907
April	1	6	1880	--	3	1880
May	--	3	1883	--	1	2002**
June	--	1	1991	0	0	----
July	0	1	1974	0	0	----
August	0	1	1965**	0	0	----
September	--	3	1904	0	2	1904
October	1	5	1889	--	3	1889
November	2	6	1973**	--	4	1885
December	2	10	1880	1	5	1955
Annual	14	31	1983	4	11	1940

-- Less than one day.

* Averages based on Climatological Normals 1971-2000

** Also recorded earlier years

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.01 INCH OR MORE
(July 1878 - June 2005)

<u>Days</u>	<u>Period</u>	<u>Total Rainfall</u>
16	February 6-February 21, 1992	6.78
15	February 10-February 24, 1936	8.00
15	November 24-December 8, 1970	7.12
14	January 3-January 16, 1995	9.30
14	January 23-February 5, 1911	7.01
14	November 29-December 12, 1889	5.34
13	December 13-December 25, 1880	7.75
13	January 18-January 30, 1969	6.45
12	December 31, 1939-January 11, 1940	6.65
12	March 15-March 26, 1907	5.94
12	February 26-March 9, 1911	4.78
12	January 24-February 4, 1915	2.59

Only periods with 12 or more days tabulated

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.25 INCH OR MORE
(July 1878 - June 2005)

<u>Days</u>	<u>Period</u>	<u>Total Rainfall</u>
10	December 17 - December 26, 1884	10.34
9	February 8 - February 16, 1992	5.04
8	February 14 - February 21, 1980	6.95
8	January 11 - January 18, 1906	6.52
8	December 20 - December 27, 192	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

Only periods with 6 or more days tabulated

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.50 INCH OR MORE
(July 1878 - June 2005)

<u>Days</u>	<u>Period</u>	<u>Total Rainfall</u>
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

Only periods with 4 or more days tabulated

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 1.00 INCH OR MORE
(July 1978 - June 2005)

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

Only periods with 3 or more days tabulated

**GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT
MEASURABLE RAIN DURING AN ENTIRE YEAR**

(July 1877 – June 2005)

<u>Days</u>	<u>Period</u>	<u>Days</u>	<u>Period</u>
194	May 13 - November 22, 1880	153	May 27 - October 26, 1905
174	April 18 - October 8, 1903	147	May 7 - September 30, 1926
169	May 22 - November 6, 2002	145	May 13 - October 4, 1924
162	May 25 - November 2, 1960	143	May 21 - October 10, 1987
160	May 9 - October 15, 1886	143	April 27 - September 16, 1959
155	May 31 - November 1, 1932	140	May 31 - October 17, 1990

**GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT MEASURABLE
RAIN FROM MID-SUMMER THROUGH THE FALL SEASON**

(August 1877 - June 2005)

<u>Days</u>	<u>Period</u>	<u>Days</u>	<u>Period</u>
122	August 1 - November 30, 1995	73	August 1 - October 12, 1988
114	August 1 - November 22, 1880	71	August 1 - October 10, 1987
98	August 1 - November 6, 2002	68	August 1 - October 7, 2000
93	August 1 - November 2, 1960	68	September 1 - November 7, 1915
92	August 1 - November 1, 1932	67	August 5 - October 10, 1899
87	August 1 - October 26, 1960	66	August 1 - October 5, 1929
82	August 6 - October 26, 1974	64	August 1 - October 3, 1994
82	September 7 - November 27, 1887	64	September 30 - December 2, 1890
81	August 11 - October 30, 1913	63	August 12 - October 13, 1965
80	August 1 - October 19, 1992	63	September 7 - November 8, 1925
78	August 1 - October 17, 1990	62	September 11 - November 11, 1952

**GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT
MEASURABLE RAIN DURING THE WINTER MONTHS**

(November 1877 - June 2005)

<u>Days</u>	<u>Period</u>	<u>Days</u>	<u>Period</u>
44	November 15 - December 28, 1976	36	December 18, 1960 - January 22, 1961
42	January 17 - February 27, 1899	36	November 15 - December 20, 1958
41	December 18, 1962 - January 27, 1957	34	December 5, 1956 - January 7, 1957
38	November 4 - December 11, 1959	32	December 10, 1999 - January 10, 2000
38	November 8 - December 15, 1940	32	November 2 - December 3, 1956
38	February 15 - March 24, 1883	31	November 1 - December 1, 1933
36	November 26-December 31, 1989		

**WATER YEAR HAVING 11 MONTHS
OF MEASURABLE RAIN**
(July 1849 - June 2005)

Season	Season
2002-03	1961-62
1997-98	1949-50
1984-85	1897-98
1983-84	1896-97
1979-80	1896-97
1962-63	1860-61

**WATER YEAR HAVING 5 OR MORE MONTHS
WITHOUT MEASURABLE RAIN**
(July 1849 - June 2005)

<u>Season</u>	<u>Season</u>
1852-53	1886-87
1856-57	1902-03
1872-73	1929-30
1880-81	1995-96

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

** No Water Year has ever had measurable rain for the entire 12 months

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.

15 WETTEST WATER YEARS
(July 1849 - June 2005)

Rank	Amount	Year
1	37.49	1982-83
2	36.35	1852-53
3	36.10	1861-62
4	36.00	1849-50
5	33.80	1889-90
6	32.79	1867-68
7	32.65	1981-82
8	32.27	1885-86
9	32.25	1997-98
10	31.94	1957-58
11	31.83	1940-41
12	31.77	1994-95
13	29.75	1985-86
14	27.74	1955-56
15	27.70	1992-93

15 DRIEST WATER YEARS
(July 1849 - June 2005)

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

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

SNOWFALL IN SACRAMENTO

(January 1878 - June 2005)

<u>Year</u>	<u>Date</u>	<u>Total Snow</u>	<u>Year</u>	<u>Date</u>	<u>Total Snow</u>
2002	January 28	T	1933	January 18	T
1996	February 27	T	1932	February 01	T
1988	December 27, 28	T	1932	January 12	0.2
1982	March 17	T	1930	January 12	T
1976	February 5	2.0	1925	April 20	T
1974	January 4	T	1922	January 30	1.5
1972	December 6, 12	T	1916	January 1	2.5
1968	December 19, 20, 23	T	1916	January 27	0.5
1964	January 21	T	1913	January 9	0.1
1962	January 21	T	1911	December 29	T
1957	January 25, 26	T	1911	February 26, 27	T
1955	April 18, 26	T	1907	January 6	0.4
1954	March 19	T	1899	February 2	T
1952	March 15	T	1896	March 2	T
1952	February 20	T	1888	January 16	0.1
1952	January 12	T	1888	January 5	3.0
1949	February 11	T	1888	January 4	0.5
1942	March 14	2.0	1883	February 1, 6	T
1937	January 10, 11, 24, 30	T	1882	February 17, 18	1.0
1935	March 8	T	1880	January 26	1.0
1932	December 9	T	1879	January 13	0.5

Snowfall data is based on the city office records from January 1878 through December 1950. Executive Airport data is used from that time until April 15, 1998. Thereafter, records revert to Sacramento City data.*

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.

* *Snowfall observation point is Sacramento WFO: near the corner of Watt & El Camino Avenues.*

GREATEST SNOWFALL DURING ANY 24 HOUR PERIOD

(January 1878 - June 2005)

<u>Month</u>	<u>Amount</u> (inches)	<u>Date</u>	<u>Year</u>
January	3.5	04 – 05	1888
February	2.0	05	1976
March	2.0	14	1942
April	T	18, 26	1955**
May	0	N/A	N/A
June	0	N/A	N/A
July	0	N/A	N/A
August	0	N/A	N/A
September	0	N/A	N/A
October	0	N/A	N/A
November	0	N/A	N/A
December	T	27, 28	1988*
Greatest Yearly Snowfall Total	4.0	Fell on 04, 05, 16	January 1888

** Also occurred in earlier years.

VI. MISCELLANEOUS STATISTICS

**AVERAGE AND GREATEST NUMBER OF DAYS WITH THUNDERSTORMS
BY MONTH WITH YEAR OF OCCURRENCE**

(January 1948 - June 2005)

<u>Month</u>	<u>Avg.# Days with Thunderstorms</u>	<u>Greatest # Days with Thunderstorms</u>	<u>Year</u>
January	0.4	3	1970
February	0.6	4	1992
March	0.8	4	1983
April	0.7	3	1967
May	0.4	3	2003**
June	0.3	2	1989
July	0.2	2	1991**
August	0.1	2	2003**
September	0.5	2	1989**
October	0.3	2	1979**
November	0.2	3	1970
December	0.2	2	1970
Annual	4.7	10	1970**

* Averages based on Climatological Normals 1971-2000

** Also recorded earlier years.

Downtown Sacramento data used from January 1948-December 1962. Sacramento Executive Airport used thereafter.

AVERAGE RELATIVE HUMIDITY BY TIME PERIODS

	<u>4 AM</u>	<u>10 AM</u>	<u>4 PM</u>	<u>10 PM</u>
January	90	86	70	87
February	88	78	60	82
March	86	70	54	78
April	82	58	43	73
May	82	51	36	70
June	79	47	31	65
July	77	47	29	62
August	78	50	29	64
September	78	50	31	65
October	80	57	38	70
November	86	73	57	81
December	90	84	70	87
Annual	83	63	46	74

* Averages based on Climatological Normals 1971-2000

**AVERAGE SEA-LEVEL PRESSURE WITH HIGHEST AND LOWEST
BY MONTH WITH DATE AND YEAR OF OCCURRENCE**
(July 1877 - June 2005)

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

* Averages based on Climatological Normals 1971-2000

** Also recorded earlier years.

Downtown Sacramento used until July 1, 1939 - Executive Airport used thereafter.

AVERAGE SUNSHINE, CLOUDINESS AND FOG
(January 1948 - June 2005)

<u>Month</u>	<u>SUNSHINE</u>	<u>SKY COVER (Sunrise-Sunset)</u>				<u>DENSE FOG</u>		<u>Year</u>
	<u>Percent Average</u>	<u>Sky Cover (tenths)</u>	<u>Clear (days)</u>	<u>Partly Cloudy (days)</u>	<u>Cloudy (days)</u>	<u>Monthly Average (days)</u>	<u>Record (days)</u>	
January	48%	7.1	6.5	6.0	18.5	10.1	23	1961
February	65%	6.2	7.9	6.8	13.5	5.3	13	1963**
March	74%	5.6	10.1	8.2	12.7	1.7	6	1986
April	82%	4.8	12.1	9.5	8.4	0.3	2	1965**
May	90%	3.6	17.0	8.5	5.4	0.2	2	1971
June	94%	2.2	21.7	5.9	2.4	0.0	0	----
July	97%	1.1	27.0	3.1	1.0	0.0	0	----
August	96%	1.4	25.6	4.1	1.3	0.0	1	1966
September	93%	1.8	23.6	4.2	2.1	0.2	2	1963
October	86%	3.2	19.3	6.1	5.6	1.4	11	1962
November	66%	5.6	10.1	7.4	12.5	5.3	11	1982
December	49%	6.8	7.7	5.9	17.4	9.5	22	1989**
Annual	78%	4.1	188.7	75.7	100.8	34.3	64	1962

* Averages based on Climatological Normals 1971-2000

** Also occurred in previous years.

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. Beginning July 1996, sky cover has been recorded in fractions of eights in order to conform to international standards. A further break-down is as follows:

	July 1996 and Later	Prior to July 1996
Clear	0/8 to 2/8 sky cover	0/10 to 3/10 sky cover
Partly Cloudy	3/8 to 6/8 sky cover	4/10 to 7/10 sky cover
Cloudy	7/8 or 8/8 sky cover	8/10 to 10/10 sky cover

**GREATEST NUMBER OF CONSECUTIVE DAYS WITH DENSE FOG
WITH MONTH AND YEAR OF OCCURRENCE**
(November 1949 - June 2005)

<u>Days</u>	<u>Period</u>	<u>Year</u>	<u>Days</u>	<u>Period</u>	<u>Year</u>
17	December 12-28	1985	9	January 12-20	1965
14	December 23 - January 5	2000-01	9	January 17-25	1961
13	January 13-25	1975	9	November 25 - December 3	1949
11	December 3-13	1962	9	February 3-11	1954
10	December 2-11	1977	8	February 3-10	1991
10	December 27 - January 5	1962-63	8	December 23-30	1989
9	December 23-31	2000	8	January 29 - February 5	1962
9	January 6-14	1986	8	December 14-21	1956
9	February 6-14	1971	8	December 14-21	1954

Only periods with 8 or more days are tabulated.

**GREATEST NUMBER OF NON-CONSECUTIVE DAYS WITH DENSE FOG
WITH MONTH AND YEAR OF OCCURRENCE**
(November 1949 - June 2005)

<u>Days</u>	<u>Period</u>	<u>Days</u>	<u>Period</u>	<u>Days</u>	<u>Monthly Avg.</u>
23	January 1961	15	January 1975	10.1	January
22	December 1989	15	January 1972	5.2	February
22	December 1985	15	January 1965	1.7	March
20	December 1962	14	December 1986	.3	April
19	December 2000	14	January 1986	.2	May
19	December 1963	14	January 1983	0	June
19	January 1958	14	January 1964	0	July
18	January 1985	14	January 1963	0	August
16	December 1977	14	January 1962	.2	September
16	January 1955			1.4	October
				5.1	November
				9.6	December
				33.9	Annual

Only periods with 14 or more days are tabulated.

* Averages based on Climatological Normals 1971-2000

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

**AVERAGE WIND SPEED, PREVAILING DIRECTION AND FASTEST MILE
BY MONTH WITH DATE AND YEAR OF OCCURRENCE
(July 1877 - June 2005)**

<u>Month</u>	<u>Average Speed</u>	<u>Prevailing Direction</u>	<u>Fastest Mile</u>	<u>Direction</u>	<u>Date</u>	<u>Year</u>
January	7.2	Southeast	60	Southeast	17	1954
February	7.4	S-Southeast	58	Southeast	9	1938
March	8.5	Southwest	66	South	14	1952
April	8.6	Southwest	45	Southwest	25	1955
May	9.1	Southwest	40	Southeast	6	1912
June	9.7	Southwest	47	Southwest	23	1950
July	8.9	S-Southwest	36	Southwest	12	1956
August	8.5	Southwest	38	Southwest	19	1954
September	7.4	Southwest	42	Northwest	16	1965
October	6.4	Southwest	68	Southeast	26	1950
November	6.0	N-Northwest	70	Southeast	13	1953
December	6.6	S-Southeast	70	Southeast	7	1952
Annual	7.8	Southwest				

* Averages based on Climatological Normals 1971-2000

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

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

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

$$\text{Estimated Peak Gust} = (\text{Fastest Mile}) \times (1.3)$$

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

$$\text{Estimated peak gust} = (70) \times (1.3) = 91 \text{ mph}$$

**NORMAL HEATING DEGREE DAYS WITH HIGHEST AND LOWEST
BY MONTHS AND YEAR OF OCCURRENCE
SACRAMENTO EXECUTIVE AIRPORT
(July 1960 - June 2005)**

<u>Month</u>	<u>Normal</u>	<u>Highest</u>	<u>Year</u>	<u>Lowest</u>	<u>Year</u>
July	0	7	1974	0	Most
August	0	4	1964	0	Most
September	11	53	1986	0	2003**
October	84	191	1971	7	1983
November	359	532	1982	145	1981
December	595	749	1972	421	1995
January	580	736	1963	411	1986
February	387	496	1989	249	1963
March	335	449	1975	163	2004
April	208	456	1967	71	1990
May	97	190	1998	0	1992
June	1	40	1982	0	2002**
Season	2666	3149	1982-1983	1851	1995-1996

* Normals based on 1971-2000 temperature data.

** Also occurred in previous years

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

$$\begin{aligned} \text{Heating Degree Day} &= 65 - 55 \\ &= 10 \end{aligned}$$

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

**NORMAL COOLING DEGREE DAYS WITH HIGHEST AND LOWEST
BY MONTH AND YEAR OF OCCURRENCE
SACRAMENTO EXECUTIVE AIRPORT
(January 1969 - June 2005)**

<u>Month</u>	<u>Normal</u>	<u>Highest</u>	<u>Year</u>	<u>Lowest</u>	<u>Year</u>
January	0	0	----	0	All
February	0	0	----	0	All
March	6	10	1986	0	Most
April	24	60	1989	0	2003**
May	110	227	1997	2	1998
June	204	319	1985	78	1998
July	320	484	1988	220	1987
August	303	422	1996	207	1980
September	210	375	1975	95	1986
October	66	208	1991	8	1998
November	5	11	1997	0	Most
December	0	0	----	0	All
Season	1248	1654	1975	737	1982

* Normals based on 1961-1990 temperature data.

** Also occurred in previous years

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

$$\begin{aligned} \text{Cooling Degree Days} &= 72 - 65 \\ &= 7 \end{aligned}$$

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

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

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

HIGHEST TEMP	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	El Azizia, Libya, Africa - September 13, 1922

<u>LOWEST TEMP</u>	<u>F</u>	<u>LOCATION AND DATE</u>
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	15.78	Nei Monggol, Muduoaidang, China, Aug 1, 1977

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

WEATHER EXTREMES FOR SACRAMENTO COMPARED TO 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	7.25	Seasonal Year- July 1975-June 1976
California	0.00	Bagdad (San Bernardino County)- Calendar Year 1913
	0.00	Greenland Ranch (Death Valley)- Calendar Year 1929
United States	0.00	Same as California
North America	0.00	Same as California
World	0.00	Iquique, Chile- November 1945 thru May 1957
	0.00	Arica, Chile- October 1903 thru December 1917
	0.00	Kharga, Egypt- December 1957 thru March 1960
	0.00	Wadi Halfa, Sudan- June 1945 thru April 1949
	0.00	Bagdad (San Bernardino County)- Calendar Year 1913
	0.00	Greenland Ranch (Death Valley)- Calendar Year 1929

WEATHER EXTREMES FOR SACRAMENTO COMPARED TO 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	1140.0	Mt. Baker Ski Area, Washington-1998-1999
North America	1140.0	Same as the United States
World	-----	Not Available

GREATEST SNOW DEPTH (Inches)

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

LOWEST SEA LEVEL PRESSURE (Millibars/Inches)

Sacramento	980.4/28.95	January 27, 1916
------------	-------------	------------------

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

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

HIGHEST SEA LEVEL PRESSURE (Millibars/Inches)

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

HIGHEST WIND SPEED (Miles Per Hour)

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

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

NOTE:

Most information on Weather Extremes, other than the data for Sacramento, was extracted from the Weather Bureau Western Region Technical Memorandum WR-28, entitled

WEATHER EXTREMES, by Robert J. Schmidli, dated April 1968 (Revised October 1991), the USA Today Weather Almanac, dated 1995, and from the Engineer Research and Development Center, U.S. Army Topographic Engineering Center.

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.

**NOAA TECHNICAL MEMORANDA
National Weather Service, Western Region Subseries**

The National Weather Service (NWS) Western Region (WR) Subseries provides an informal medium for the documentation and quick dissemination of results not appropriate, or not yet ready, for formal publication. The series is used to report on work in progress, to describe technical procedures and practices, or to relate progress to a limited audience. These Technical Memoranda will report on investigations devoted primarily to regional and local problems of interest mainly to personnel, and hence will not be widely distributed.

Papers 1 to 25 are in the former series, ESSA Technical Memoranda, Western Region Technical Memoranda (WRTM); papers 24 to 59 are in the former series, ESSA Technical Memoranda,

Weather Bureau Technical Memoranda (WBTM). Beginning with 60, the papers are part of the series, NOAA Technical Memoranda NWS. Out-of-print memoranda are not listed.

Papers 2 to 22, except for 5 (revised edition), are available from the National Weather Service Western Region, Scientific Services Division, 125 South State Street - Rm 1311, Salt Lake City, Utah 84138-1102. Paper 5 (revised edition), and all others beginning with 25 are available from the National Technical Information Service, U.S. Department of Commerce, Sills Building, 5285 Port Royal Road, Springfield, Virginia 22161. Prices vary for all paper copies; microfiche are \$3.50. Order by accession number shown in parentheses at end of each entry.

ESSA Technical Memoranda (WRTM)

- 2 Climatological Precipitation Probabilities. Compiled by Lucianne Miller, December 1965.
- 3 Western Region Pre- and Post-FP-3 Program, December 1, 1965, to February 20, 1966. Edward D. Diemer, March 1966.
- 5 Station Descriptions of Local Effects on Synoptic Weather Patterns. Philip Williams, Jr., April 1966 (Revised November 1967, October 1969). (PB-17800)
- 8 Interpreting the RAREP. Herbert P. Benner, May 1966 (Revised January 1967).
- 11 Some Electrical Processes in the Atmosphere. J. Latham, June 1966.
- 17 A Digitalized Summary of Radar Echoes within 100 Miles of Sacramento, California. J. A. Youngberg and L. B. Overaas, December 1966.
- 21 An Objective Aid for Forecasting the End of East Winds in the Columbia Gorge, July through October. D. John Coparanis, April 1967.
- 22 Derivation of Radar Horizons in Mountainous Terrain. Roger G. Pappas, April 1967.

ESSA Technical Memoranda, Weather Bureau Technical Memoranda (WBTM)

- 25 Verification of Operation Probability of Precipitation Forecasts, April 1966-March 1967. W. W. Dickey, October 1967. (PB-176240)
- 26 A Study of Winds in the Lake Mead Recreation Area. R. P. Augulis, January 1968. (PB-177830)
- 28 Weather Extremes. R. J. Schmidli, April 1968 (Revised March 1986). (PB86 177672/AS). (Revised October 1991 - PB92-115062/AS)
- 29 Small-Scale Analysis and Prediction. Philip Williams, Jr., May 1968. (PB178425)
- 30 Numerical Weather Prediction and Synoptic Meteorology. CPT Thomas D. Murphy, USAF, May 1968. (AD 673365)
- 31 Precipitation Detection Probabilities by Salt Lake ARTC Radars. Robert K. Belesky, July 1968. (PB 179084)
- 32 Probability Forecasting--A Problem Analysis with Reference to the Portland Fire Weather District. Harold S. Ayer, July 1968. (PB 179289)
- 36 Temperature Trends in Sacramento--Another Heat Island. Anthony D. Lentini, February 1969. (PB 183055)
- 37 Disposal of Logging Residues Without Damage to Air Quality. Owen P. Cramer, March 1969. (PB 183057)
- 39 Upper-Air Lows Over Northwestern United States. A.L. Jacobson, April 1969. PB 184296)
- 40 The Man-Machine Mix in Applied Weather Forecasting in the 1970s. L.W. Snellman, August 1969. (PB 185068)
- 43 Forecasting Maximum Temperatures at Helena, Montana. David E. Olsen, October 1969. (PB 185762)
- 44 Estimated Return Periods for Short-Duration Precipitation in Arizona. Paul C. Kangieser, October 1969. (PB 187763)
- 46 Applications of the Net Radiometer to Short-Range Fog and Stratus Forecasting at Eugene, Oregon. L. Yee and E. Bates, December 1969. (PB 190476)
- 47 Statistical Analysis as a Flood Routing Tool. Robert J.C. Burnash, December 1969. (PB 188744)
- 48 Tsunami. Richard P. Augulis, February 1970. (PB 190157)
- 49 Predicting Precipitation Type. Robert J.C. Burnash and Floyd E. Hug, March 1970. (PB 190962)
- 50 Statistical Report on Aeroallergens (Pollens and Molds) Fort Huachuca, Arizona, 1969. Wayne S. Johnson, April 1970. (PB 191743)
- 51 Western Region Sea State and Surf Forecaster's Manual. Gordon C. Shields and Gerald B. Burdwell, July 1970. (PB 193102)
- 52 Sacramento Weather Radar Climatology. R.G. Pappas and C. M. Veliquette, July 1970. (PB 193347)
- 54 A Refinement of the Vorticity Field to Delineate Areas of Significant Precipitation. Barry B. Aronovitch, August 1970.
- 55 Application of the SSARR Model to a Basin without Discharge Record. Vail Schermerhorn and Donal W. Kuehl, August 1970. (PB 194394)
- 56 Areal Coverage of Precipitation in Northwestern Utah. Philip Williams, Jr., and Werner J. Heck, September 1970. (PB 194389)
- 57 Preliminary Report on Agricultural Field Burning vs. Atmospheric Visibility in the Willamette Valley of Oregon. Earl M. Bates and David O. Chilcote, September 1970. (PB 194710)
- 58 Air Pollution by Jet Aircraft at Seattle-Tacoma Airport. Wallace R. Donaldson, October 1970. (COM 71 00017)
- 59 Application of PE Model Forecast Parameters to Local-Area Forecasting. Leonard W. Snellman, October 1970. (COM 71 00016)
- 60 An Aid for Forecasting the Minimum Temperature at Medford, Oregon, Arthur W. Fritz, October 1970. (COM 71 00120)
- 63 700-mb Warm Air Advection as a Forecasting Tool for Montana and Northern Idaho. Norris E. Woerner, February 1971. (COM 71 00349)
- 64 Wind and Weather Regimes at Great Falls, Montana. Warren B. Price, March 1971.
- 65 Climate of Sacramento, California. Laura Masters-Bevan. NWSO Sacramento, November 1998 (6th Revision. (PB99-118424)
- 66 A Preliminary Report on Correlation of ARTCC Radar Echoes and Precipitation. Wilbur K. Hall, June 1971. (COM 71 00829)
- 69 National Weather Service Support to Soaring Activities. Ellis Burton, August 1971. (COM 71 00956)
- 71 Western Region Synoptic Analysis-Problems and Methods. Philip Williams, Jr., February 1972. (COM 72 10433)
- 74 Thunderstorms and Hail Days Probabilities in Nevada. Clarence M. Sakamoto, April 1972. (COM 72 10554)

- 75 A Study of the Low Level Jet Stream of the San Joaquin Valley. Ronald A. Willis and Philip Williams, Jr., May 1972. (COM 72 10707)
- 76 Monthly Climatological Charts of the Behavior of Fog and Low Stratus at Los Angeles International Airport. Donald M. Gales, July 1972. (COM 72 11140)
- 77 A Study of Radar Echo Distribution in Arizona During July and August. John E. Hales, Jr., July 1972. (COM 72 11136)
- 78 Forecasting Precipitation at Bakersfield, California, Using Pressure Gradient Vectors. Earl T. Riddiough, July 1972. (COM 72 11146)
- 79 Climate of Stockton, California. Robert C. Nelson, July 1972. (COM 72 10920)
- 80 Estimation of Number of Days Above or Below Selected Temperatures. Clarence M. Sakamoto, October 1972. (COM 72 10021)
- 81 An Aid for Forecasting Summer Maximum Temperatures at Seattle, Washington. Edgar G. Johnson, November 1972. (COM 73 10150)
- 82 Flash Flood Forecasting and Warning Program in the Western Region. Philip Williams, Jr., Chester L. Glenn, and Roland L. Raetz, December 1972, (Revised March 1978). (COM 73 10251)
- 83 A comparison of Manual and Semiautomatic Methods of Digitizing Analog Wind Records. Glenn E. Rasch, March 1973. (COM 73 10669)
- 86 Conditional Probabilities for Sequences of Wet Days at Phoenix, Arizona. Paul C. Kangieser, June 1973. (COM 73 11264)
- 87 A Refinement of the Use of K-Values in Forecasting Thunderstorms in Washington and Oregon. Robert Y.G. Lee, June 1973. (COM 73 11276)
- 89 Objective Forecast Precipitation Over the Western Region of the United States. Julia N. Paegle and Larry P. Kierulff, September 1973. (COM 73 11946/3AS)
- 91 Arizona "Eddy" Tornadoes. Robert S. Ingram, October 1973. (COM 73 10465)
- 92 Smoke Management in the Willamette Valley. Earl M. Bates, May 1974. (COM 74 11277/AS)
- 93 An Operational Evaluation of 500-mb Type Regression Equations. Alexander E. MacDonald, June 1974. (COM 74 11407/AS)
- 94 Conditional Probability of Visibility Less than One-Half Mile in Radiation Fog at Fresno, California. John D. Thomas, August 1974. (COM 74 11555/AS)
- 95 Climate of Flagstaff, Arizona. Paul W. Sorenson, and updated by Reginald W. Preston, January 1987. (PB87 143160/AS)
- 96 Map type Precipitation Probabilities for the Western Region. Glenn E. Rasch and Alexander E. MacDonald, February 1975. (COM 75 10428/AS)
- 97 Eastern Pacific Cut-Off Low of April 21-28, 1974. William J. Alder and George R. Miller, January 1976. (PB 250 711/AS)
- 98 Study on a Significant Precipitation Episode in Western United States. Ira S. Brenner, April 1976. (COM 75 10719/AS)
- 99 A Study of Flash Flood Susceptibility-A Basin in Southern Arizona. Gerald Williams, August 1975. (COM 75 11360/AS)
- 102 A Set of Rules for Forecasting Temperatures in Napa and Sonoma Counties. Wesley L. Tuft, October 1975. (PB 246 902/AS)
- 103 Application of the National Weather Service Flash-Flood Program in the Western Region. Gerald Williams, January 1976. (PB 253 053/AS)
- 104 Objective Aids for Forecasting Minimum Temperatures at Reno, Nevada, During the Summer Months. Christopher D. Hill, January 1976. (PB 252 866/AS)
- 105 Forecasting the Mono Wind. Charles P. Ruscha, Jr., February 1976. (PB 254 650)
- 106 Use of MOS Forecast Parameters in Temperature Forecasting. John C. Plankinton, Jr., March 1976. (PB 254 649)
- 107 Map Types as Aids in Using MOS PoPs in Western United States. Ira S. Brenner, August 1976. (PB 259 594)
- 108 Other Kinds of Wind Shear. Christopher D. Hill, August 1976. (PB 260 437/AS)
- 109 Forecasting North Winds in the Upper Sacramento Valley and Adjoining Forests. Christopher E. Fontana, September 1976. (PB 273 677/AS)
- 110 Cool Inflow as a Weakening Influence on Eastern Pacific Tropical Cyclones. William J. Denney, November 1976. (PB 264 655/AS)
- 112 The MAN/MOS Program. Alexander E. MacDonald, February 1977. (PB 265 941/AS)
- 113 Winter Season Minimum Temperature Formula for Bakersfield, California, Using Multiple Regression. Michael J. Oard, February 1977. (PB 273 694/AS)
- 114 Tropical Cyclone Kathleen. James R. Fors, February 1977. (PB 273 676/AS)
- 116 A Study of Wind Gusts on Lake Mead. Bradley Colman, April 1977. (PB 268 847)
- 117 The Relative Frequency of Cumulonimbus Clouds at the Nevada Test Site as a Function of K-Value. R.F. Quiring, April 1977. (PB 272 831)
- 118 Moisture Distribution Modification by Upward Vertical Motion. Ira S. Brenner, April 1977. (PB 268 740)
- 119 Relative Frequency of Occurrence of Warm Season Echo Activity as a Function of Stability Indices Computed from the Yucca Flat, Nevada, Rawinsonde. Darryl Randerson, June 1977. (PB 271 290/AS)
- 121 Climatological Prediction of Cumulonimbus Clouds in the Vicinity of the Yucca Flat Weather Station. R.F. Quiring, June 1977. (PB 271 704/AS)
- 122 A Method for Transforming Temperature Distribution to Normality. Morris S. Webb, Jr., June 1977. (PB 271 742/AS)
- 124 Statistical Guidance for Prediction of Eastern North Pacific Tropical Cyclone Motion - Part I. Charles J. Neumann and Preston W. Leftwich, August 1977. (PB 272 661)
- 125 Statistical Guidance on the Prediction of Eastern North Pacific Tropical Cyclone Motion - Part II. Preston W. Leftwich and Charles J. Neumann, August 1977. (PB 273 155/AS)
- 126 Climate of San Francisco. E. Jan Null, February 1978. (Revised by George T. Pericht, April 1988 and January 1995). (PB88 208624/AS)
- 127 Development of a Probability Equation for Winter-Type Precipitation Patterns in Great Falls, Montana. Kenneth B. Mielke, February 1978. (PB 281 387/AS)
- 128 Hand Calculator Program to Compute Parcel Thermal Dynamics. Dan Gudgeal, April 1978. (PB 283 080/AS)
- 129 Fire whirls. David W. Goens, May 1978. (PB 283 866/AS)
- 130 Flash-Flood Procedure. Ralph C. Hatch and Gerald Williams, May 1978. (PB 286 014/AS)
- 131 Automated Fire-Weather Forecasts. Mark A. Mollner and David E. Olsen, September 1978. (PB 289 916/AS)
- 132 Estimates of the Effects of Terrain Blocking on the Los Angeles WSR-74C Weather Radar. R.G. Pappas, R.Y. Lee, B.W. Finke, October 1978. (PB 289767/AS)
- 133 Spectral Techniques in Ocean Wave Forecasting. John A. Jannuzzi, October 1978. (PB291317/AS)
- 134 Solar Radiation. John A. Jannuzzi, November 1978. (PB291195/AS)

- 135 Application of a Spectrum Analyzer in Forecasting Ocean Swell in Southern California Coastal Waters. Lawrence P. Kierulff, January 1979. (PB292716/AS)
- 136 Basic Hydrologic Principles. Thomas L. Dietrich, January 1979. (PB292247/AS)
- 137 LFM 24-Hour Prediction of Eastern Pacific Cyclones Refined by Satellite Images. John R. Zimmerman and Charles P. Ruscha, Jr., January 1979. (PB294324/AS)
- 138 A Simple Analysis/Diagnosis System for Real Time Evaluation of Vertical Motion. Scott Heflick and James R. Fors, February 1979. (PB294216/AS)
- 139 Aids for Forecasting Minimum Temperature in the Wenatchee Frost District. Robert S. Robinson, April 1979. (PB298339/AS)
- 140 Influence of Cloudiness on Summertime Temperatures in the Eastern Washington Fire Weather district. James Holcomb, April 1979. (PB298674/AS)
- 141 Comparison of LFM and MFM Precipitation Guidance for Nevada During Doreen. Christopher Hill, April 1979. (PB298613/AS)
- 142 The Usefulness of Data from Mountaintop Fire Lookout Stations in Determining Atmospheric Stability. Jonathan W. Corey, April 1979. (PB298899/AS)
- 143 The Depth of the Marine Layer at San Diego as Related to Subsequent Cool Season Precipitation Episodes in Arizona. Ira S. Brenner, May 1979. (PB298817/AS)
- 144 Arizona Cool Season Climatological Surface Wind and Pressure Gradient Study. Ira S. Brenner, May 1979. (PB298900/AS)
- 146 The BART Experiment. Morris S. Webb, October 1979. (PB80 155112)
- 147 Occurrence and Distribution of Flash Floods in the Western Region. Thomas L. Dietrich, December 1979. (PB80 160344)
- 149 Misinterpretations of Precipitation Probability Forecasts. Allan H. Murphy, Sarah Lichtenstein, Baruch Fischhoff, and Robert L. Winkler, February 1980. (PB80 174576)
- 150 Annual Data and Verification Tabulation - Eastern and Central North Pacific Tropical Storms and Hurricanes 1979. Emil B. Gunther and Staff, EPHC, April 1980. (PB80 220486)
- 151 NMC Model Performance in the Northeast Pacific. James E. Overland, PMEL-ERL, April 1980. (PB80 196033)
- 152 Climate of Salt Lake City, Utah. William J. Alder, Sean T. Buchanan, William Cope (Retired), James A. Cisco, Craig C. Schmidt, Alexander R. Smith (Retired), Wilbur E. Figgins (Retired), February 1998 - Seventh Revision (PB98-130727)
- 153 An Automatic Lightning Detection System in Northern California. James E. Rea and Chris E. Fontana, June 1980. (PB80 225592)
- 154 Regression Equation for the Peak Wind Gust 6 to 12 Hours in Advance at Great Falls During Strong Downslope Wind Storms. Michael J. Oard, July 1980. (PB91 108367)
- 155 A Raininess Index for the Arizona Monsoon. John H. Ten Harkel, July 1980. (PB81 106494)
- 156 The Effects of Terrain Distribution on Summer Thunderstorm Activity at Reno, Nevada. Christopher Dean Hill, July 1980. (PB81 102501)
- 157 An Operational Evaluation of the Scofield/Oliver Technique for Estimating Precipitation Rates from Satellite Imagery. Richard Ochoa, August 1980. (PB81 108227)
- 158 Hydrology Practicum. Thomas Dietrich, September 1980. (PB81 134033)
- 159 Tropical Cyclone Effects on California. Arnold Court, October 1980. (PB81 133779)
- 160 Eastern North Pacific Tropical Cyclone Occurrences During Intraseasonal Periods. Preston W. Leftwich and Gail M. Brown, February 1981. (PB81 205494)
- 161 Solar Radiation as a Sole Source of Energy for Photovoltaics in Las Vegas, Nevada, for July and December. Darryl Randerson, April 1981. (PB81 224503)
- 162 A Systems Approach to Real-Time Runoff Analysis with a Deterministic Rainfall-Runoff Model. Robert J.C. Burnash and R. Larry Ferral, April 1981. (PB81 224495)
- 163 A Comparison of Two Methods for Forecasting Thunderstorms at Luke Air Force Base, Arizona. LTC Keith R. Cooley, April 1981. (PB81 225393)
- 164 An Objective Aid for Forecasting Afternoon Relative Humidity Along the Washington Cascade East Slopes. Robert S. Robinson, April 1981. (PB81 23078)
- 165 Annual Data and Verification Tabulation, Eastern North Pacific Tropical Storms and Hurricanes 1980. Emil B. Gunther and Staff, May 1981. (PB82 230336)
- 166 Preliminary Estimates of Wind Power Potential at the Nevada Test Site. Howard G. Booth, June 1981. (PB82 127036)
- 167 ARAP User's Guide. Mark Mathewson, July 1981, Revised September 1981. (PB82 196783)
- 168 Forecasting the Onset of Coastal Gales Off Washington-Oregon. John R. Zimmerman and William D. Burton, August 1981. (PB82 127051)
- 169 A Statistical-Dynamical Model for Prediction of Tropical Cyclone Motion in the Eastern North Pacific Ocean. Preston W. Leftwich, Jr., October 1981. (PB82195298)
- 170 An Enhanced Plotter for Surface Airways Observations. Andrew J. Spry and Jeffrey L. Anderson, October 1981. (PB82 153883)
- 171 Verification of 72-Hour 500-MB Map-Type Predictions. R.F. Quiring, November 1981. (PB82-158098)
- 172 Forecasting Heavy Snow at Wenatchee, Washington. James W. Holcomb, December 1981. (PB82-177783)
- 173 Central San Joaquin Valley Type Maps. Thomas R. Crossan, December 1981. (PB82 196064)
- 174 ARAP Test Results. Mark A. Mathewson, December 1981. (PB82 198103)
- 176 Approximations to the Peak Surface Wind Gusts from Desert Thunderstorms. Darryl Randerson, June 1982. (PB82 253089)
- 177 Climate of Phoenix, Arizona. Robert J. Schmidli and Austin Jamison, April 1969 (Revised July 1996). (PB96-191614)
- 178 Annual Data and Verification Tabulation, Eastern North Pacific Tropical Storms and Hurricanes 1982. E.B. Gunther, June 1983. (PB85 106078)
- 179 Stratified Maximum Temperature Relationships Between Sixteen Zone Stations in Arizona and Respective Key Stations. Ira S. Brenner, June 1983. (PB83 249904)
- 180 Standard Hydrologic Exchange Format (SHEF) Version I. Phillip A. Pasteris, Vernon C. Bissel, David G. Bennett, August 1983. (PB85 106052)
- 181 Quantitative and Spatial Distribution of Winter Precipitation along Utah's Wasatch Front. Lawrence B. Dunn, August 1983. (PB85 106912)
- 182 500 Millibar Sign Frequency Teleconnection Charts - Winter. Lawrence B. Dunn, December 1983. (PB85 106276)
- 183 500 Millibar Sign Frequency Teleconnection Charts - Spring. Lawrence B. Dunn, January 1984. (PB85 111367)
- 184 Collection and Use of Lightning Strike Data in the Western U.S. During Summer 1983. Glenn Rasch and Mark Mathewson, February 1984. (PB85 110534)
- 185 500 Millibar Sign Frequency Teleconnection Charts - Summer. Lawrence B. Dunn, March 1984. (PB85 111359)
- 186 Annual Data and Verification Tabulation eastern North Pacific Tropical Storms and Hurricanes 1983. E.B. Gunther, March 1984. (PB85 109635)
- 187 500 Millibar Sign Frequency Teleconnection Charts - Fall. Lawrence B. Dunn, May 1984. (PB85-110930)
- 188 The Use and Interpretation of Isentropic Analyses. Jeffrey L. Anderson, October 1984. (PB85-132694)
- 189 Annual Data & Verification Tabulation Eastern North Pacific Tropical Storms and Hurricanes 1984. E.B. Gunther and R.L. Cross, April 1985. (PB85 1878887AS)
- 190 Great Salt Lake Effect Snowfall: Some Notes and An Example. David M. Carpenter, October 1985. (PB86 119153/AS)
- 191 Large Scale Patterns Associated with Major Freeze Episodes in the Agricultural Southwest. Ronald S. Hamilton and Glenn R. Lussky, December 1985. (PB86 144474AS)
- 192 NWR Voice Synthesis Project: Phase I. Glen W. Sampson, January 1986. (PB86 145604/AS)
- 193 The MCC - An Overview and Case Study on Its Impact in the Western United States. Glenn R. Lussky, March 1986. (PB86 170651/AS)
- 194 Annual Data and Verification Tabulation Eastern North Pacific Tropical Storms and Hurricanes 1985. E.B. Gunther and R.L. Cross, March 1986. (PB86 170941/AS)
- 195 Radid Interpretation Guidelines. Roger G. Pappas, March 1986. (PB86 177680/AS)
- 196 A Mesoscale Convective Complex Type Storm over the Desert Southwest. Darryl Randerson, April 1986. (PB86 190998/AS)
- 197 The Effects of Eastern North Pacific Tropical Cyclones on the Southwestern United States. Walter Smith, August 1986. (PB87 106258AS)
- 198 Preliminary Lightning Climatology Studies for Idaho. Christopher D. Hill, Carl J. Gorski, and Michael C. Conger, April 1987. (PB87 180196/AS)
- 199 Heavy Rains and Flooding in Montana: A Case for Slantwise Convection. Glenn R. Lussky, April 1987. (PB87 185229/AS)
- 200 Annual Data and Verification Tabulation Eastern North Pacific Tropical Storms and Hurricanes 1986. Roger L. Cross and Kenneth B. Mielke, September 1987. (PB88 110895/AS)
- 201 An Inexpensive Solution for the Mass Distribution of Satellite Images. Glen W. Sampson and George Clark, September 1987. (PB88 114038/AS)
- 202 Annual Data and Verification Tabulation Eastern North Pacific Tropical Storms and Hurricanes 1987. Roger L. Cross and Kenneth B. Mielke, September 1988. (PB88-101935/AS)
- 203 An Investigation of the 24 September 1986 "Cold Sector" Tornado Outbreak in Northern California. John P. Monteverdi and Scott A. Braun, October 1988. (PB89 121297/AS)
- 204 Preliminary Analysis of Cloud-To-Ground Lightning in the Vicinity of the Nevada Test Site. Carven Scott, November 1988. (PB89 128649/AS)
- 205 Forecast Guidelines For Fire Weather and Forecasters -- How Nighttime Humidity Affects Wildland Fuels. David W. Goens, February 1989. (PB89 162549/AS)
- 206 A Collection of Papers Related to Heavy Precipitation Forecasting. Western Region Headquarters, Scientific Services Division, August 1989. (PB89 230833/AS)
- 207 The Las Vegas McCarran International Airport Microburst of August 8, 1989. Carven A. Scott, June 1990. (PB90-240268)
- 208 Meteorological Factors Contributing to the Canyon Creek Fire Blowup, September 6 and 7, 1988. David W. Goens, June 1990. (PB90-245085)
- 209 Stratus Surge Prediction Along the Central California Coast. Peter Felsch and Woodrow Whitlatch, December 1990. (PB91-129239)
- 210 Hydrotools. Tom Egger, January 1991. (PB91-151787/AS)
- 211 A Northern Utah Soaker. Mark E. Struthwolf, February 1991. (PB91-168716)
- 212 Preliminary Analysis of the San Francisco Rainfall Record: 1849-1990. Jan Null, May 1991. (PB91-208439)
- 213 Idaho Zone Preformat, Temperature Guidance, and Verification. Mark A. Mollner, July 1991. (PB91-227405/AS)
- 214 Emergency Operational Meteorological Considerations During an Accidental Release of Hazardous Chemicals. Peter Mueller and Jerry Galt, August 1991. (PB91-235424)
- 215 WeatherTools. Tom Egger, October 1991. (PB93-184950)
- 216 Creating MOS Equations for RAWs Stations Using Digital Model Data. Dennis D. Gettman, December 1991. (PB92-131473/AS)
- 217 Forecasting Heavy Snow Events in Missoula, Montana. Mike Richmond, May 1992. (PB92-196104)
- 218 NWS Winter Weather Workshop in Portland, Oregon. Various Authors, December 1992. (PB93-146785)
- 219 A Case Study of the Operational Usefulness of the Sharp Workstation in Forecasting a Mesocyclone-Induced Cold Sector Tornado Event in California. John P. Monteverdi, March 1993. (PB93-178697)
- 220 Climate of Pendleton, Oregon. Claudia Bell, August 1993. (PB93-227536)
- 221 Utilization of the Bulk Richardson Number, Helicity and Sounding Modification in the Assessment of the Severe Convective Storms of 3 August 1992. Eric C. Evenson, September 1993. (PB94-131943)
- 222 Convective and Rotational Parameters Associated with Three Tornado Episodes in Northern and Central California. John P. Monteverdi and John Quadros, September 1993. (PB94-131943)
- 223 Climate of San Luis Obispo, California. Gary Ryan, February 1994. (PB94-162062)
- 224 Climate of Wenatchee, Washington. Michael W. McFarland, Roger G. Buckman, and Gregory E. Matzen, March 1994. (PB94-164308)
- 225 Climate of Santa Barbara, California. Gary Ryan, December 1994. (PB95-173720)
- 226 Climate of Yakima, Washington. Greg DeVoir, David Hogan, and Jay Neher, December 1994. (PB95-173688)
- 227 Climate of Kalispell, Montana. Chris Maier, December 1994. (PB95-169488)
- 228 Forecasting Minimum Temperatures in the Santa Maria Agricultural District. Wilfred Pi and Peter Felsch, December 1994. (PB95-171088)
- 229 The 10 February 1994 Oroville Tornado--A Case Study. Mike Staudenmaier, Jr., April 1995. (PB95-241873)
- 230 Santa Ana Winds and the Fire Outbreak of Fall 1993. Ivory Small, June 1995. (PB95-241865)
- 231 Washington State Tornadoes. Tresté Huse, July 1995. (PB96-107024)
- 232 Fog Climatology at Spokane, Washington. Paul Frisbie, July 1995. (PB96-106604)
- 233 Storm Relative Isentropic Motion Associated with Cold Fronts in Northern Utah. Kevin B. Baker, Kathleen A. Hadley, and Lawrence B. Dunn, July 1995. (PB96-106596)
- 234 Some Climatological and Synoptic Aspects of Severe Weather Development in the Northwestern United States. Eric C. Evenson and Robert H. Johns, October 1995. (PB96-112958)
- 235 Climate of Las Vegas, Nevada. Paul H. Skrbac and Scott Cordero, December 1995. (PB96-135553)

- 236 Climate of Astoria, Oregon. Mark A. McInerney, January 1996.
- 237 The 6 July 1995 Severe Weather Events in the Northwestern United States: Recent Examples of SSWEs. Eric C. Evenson, April 1996.
- 238 Significant Weather Patterns Affecting West Central Montana. Joe Lester, May 1996. (PB96-178751)
- 239 Climate of Portland, Oregon. Clinton C. D. Rockey, May 1996. (PB96-17603) - First Revision, October 1999
- 240 Downslope Winds of Santa Barbara, CA. Gary Ryan, July 1996. (PB96-191697)
- 241 Operational Applications of the Real-time National Lightning Detection Network Data at the NWSO Tucson, AZ. Darren McCollum, David Bright, Jim Meyer, and John Glueck, September 1996. (PB97-108450)
- 242 Climate of Pocatello, Idaho. Joe Heim, October 1996. (PB97-114540)
- 243 Climate of Great Falls, Montana. Matt Jackson and D. C. Williamson, December 1996. (PB97-126684)
- 244 WSR-88D VAD Wind Profile Data Influenced by Bird Migration over the Southwest United States. Jesus A. Haro, January 1997. (PB97-135263)
- 245 Climatology of Cape for Eastern Montana and Northern Wyoming. Heath Hockenberry and Keith Meier, January 1997. (PB97-133425)
- 246 A Western Region Guide to the Eta-29 Model. Mike Staudenmaier, Jr., March 1997. (PB97-144075)
- 247 The Northeast Nevada Climate Book. Edwin C. Clark, March 1997. (First Revision - January 1998 - Andrew S. Gorelow and Edwin C. Clark - PB98-123250)
- 248 Climate of Eugene, Oregon. Clinton C. D. Rockey, April 1997. (PB97-155303)
- 249 Climate of Tucson, Arizona. John R. Glueck, October 1997
- 250 Northwest Oregon Daily Extremes and Normans. Clinton C. D. Rockey, October 1997
- 251 A Composite Study Examining Five Heavy Snowfall Patterns for South-Central Montana. Jonathan D. Van Ausdall and Thomas W. Humphrey. February 1998. (PB98-125255)
- 252 Climate of Eureka, California. Alan H. Puffer. February 1998. (PB98-130735)
- 253 Inferred Oceanic Kelvin/Rossby Wave Influence on North American West Coast Precipitation. Martin E. Lee and Dudley Chelton. April 1998. (PB98-139744)
- 254 Conditional Symmetric Instability—Methods of Operational Diagnosis and Case Study of 23-24 February 1994 Eastern Washington/Oregon Snowstorm. Gregory A. DeVoir. May 1998. (PB98-144660)
- 255 Creation and Maintenance of a Comprehensive Climate Data Base. Eugene Petrescu. August 1998. (PB98-173529)
- 256 Climate of San Diego, California. Thomas E. Evans, III and Donald A. Halvorson. October 1998. (PB99-109381)
- 257 Climate of Seattle, Washington. Dana Felton. November 1998. (PB99-113482)
- 258 1985-1998 North Pacific Tropical Cyclones Impacting the Southwestern United States and Northern Mexico: An Updated Climatology. Armando L. Garza. January 1999. (PB99-130502)
- 259 Climate of San Jose, California. Miguel Miller. April 1999. (PB99-145633)
- 260 Climate of Las Vegas, Nevada. Paul H. Skrbac. December 1999
- 261 Climate of Los Angeles, California. David Bruno, Gary Ryan, with assistance from Curt Kaplan and Jonathan Slemmer. January 2000
- 262 Climate of Miles City, Montana. David A. Spector and Mark H. Strobin. April 2000
- 263 Analysis of Radiosonde Data for Spokane, Washington. Rocco D. Pelatti. November 2000
- 264 Climate of Billings, Montana. Jeffrey J. Zeltwanger and Mark H. Strobin. November 2000
- 265 Climate of Sheridan, Wyoming. Jeffrey J. Zeltwanger, Sally Springer, Mark H. Strobin. March 2001
- 266 Climate of Sacramento, California. Laura Masters-Bevan. December 2000 (7th Revision)
- 267 Sulphur Mountain Doppler Radar: A Performance Study. Los Angeles/Oxnard WFO. August 2001
- 268 Prediction of Heavy Snow Events in the Snake River Plain Using Pattern Recognition and Regression Techniques. Thomas Andretta and William Wojcik. October 2003.
- 269 The Lewis and Clark Expedition 1803-1806, Weather, Water and Climate. Vernon Preston. December 2004
- 270 Climate of San Diego California. Emmanuel M. Isla, Steve Vanderburg, Christopher Medjber, Daniel Paschall, December 2004. 71 Climate of Las Vegas, Nevada. Revised by Andrew S. Gorelow, January 2005. Previous Edition Paul H. Skrbac. December 1999
- 272 Climate of Sacramento, California. Laura A. Bevan, George Cline, Revised June 2005.

NOAA SCIENTIFIC AND TECHNICAL PUBLICATIONS

The National Oceanic and Atmospheric Administration was established as part of the Department of Commerce on October 3, 1970. The mission responsibilities of NOAA are to assess the socioeconomic impact of natural and technological changes in the environment and to monitor and

predict the state of the solid Earth, the oceans and their living resources, the atmosphere, and the space environment of the Earth.

The major components of NOAA regularly produce various types of scientific and technical information in the following kinds of publications.

PROFESSIONAL PAPERS--Important definitive research results, major techniques, and special investigations.

CONTRACT AND GRANT REPORTS--Reports prepared by contractors or grantees under NOAA sponsorship.

ATLAS--Presentation of analyzed data generally in the form of maps showing distribution of rainfall, chemical and physical conditions of oceans and atmosphere, distribution of fishes and marine mammals, ionospheric conditions, etc.

TECHNICAL SERVICE PUBLICATIONS -- Reports containing data, observations, instructions, etc. A partial listing includes data serials; prediction and outlook periodicals; technical manuals, training papers, planning reports, and information serials; and miscellaneous technical publications.

TECHNICAL REPORTS--Journal quality with extensive details, mathematical developments, or data listings.

TECHNICAL MEMORANDUMS--Reports of preliminary, partial, or negative research or technology results, interim instructions, and the like.

Information on a  ions can be obtained from:

NATIO ATION SERVICE

U. S. DEPARTMENT OF COMMERCE

5285 PORT ROYAL ROAD

SPRINGFIELD, VA 22161