

California Monthly Climate Summary June 2008

Weather Highlights

June 2008 was another month of slightly above average temperatures and below average precipitation. According to the Western Region Climate Center's [California Climate Tracker](#), the monthly average temperature was 69.2°F which is 1.1°F above the long-term average temperature for the state. With a statewide average of 0.06 inches, precipitation for June was 19% of the long term average.

June 2008 was a dry month highlighted by an unusual dry convective event. During the first week of June a series of dry cold fronts passed over northern California leading to very little precipitation. Temperatures were slightly below normal with these fronts and gusty north winds developed. During the second week, the weather remained cool with a trace of rain falling in the far north and at Oxnard. Towards the end of the week temperatures rose and gusty winds developed again. On the 23rd of June, a dry convective event pushed across northern and central California. In northern California almost 8,000 lightning strikes were recorded in a 19-hour period. This led to over 1,000 wildfires breaking out across the state. Fire fighting teams from 41 states assisted in the fight against these fires. The month finished in a static weather pattern as a high pressure system anchored itself over the desert southwest. Smoke from the wildfires produced a dense smoke layer over northern California leading to air quality and health concerns.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 144 temperature records tied or broken, and 2 precipitation records tied or broken for the month. Of the 144 temperature records, 100 were for new high maximums. On June 20th, Santa Maria Airport set a new maximum temperature record with a reading of 110°F. This broke the 1929 record of 108°F. It also set a new mark for highest June temperature reading breaking the 109°F reading set on June 21st, 1929 which also qualifies it as the highest temperature recorded at Santa Maria. June 21st, 2008 was a record setting day across the state as well. Twenty-four maximum temperature records were broken along with 10 high minimum temperature records. In addition, the 2 precipitation records were for trace precipitation recordings at Modesto and Stockton on June 21. Fresno on the other hand continues a now 131 year record of no precipitation recorded for June 21.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 55 stations recorded a minimum temperature below freezing. Ninety-nine stations recorded a maximum temperature above 100°F. Statewide extremes from the CDEC network of temperature gages are shown below. Also shown are the monthly average extremes from the CIMIS network. A table of regional average minimum, mean, and maximum temperatures from the CDEC and CIMIS networks is also shown.

Precipitation in June was well below normal. The largest amount of precipitation recorded in the CDEC precipitation gages for June 2008 was Gasquet Ranger Station on the North Coast with 0.71 inches. This is 86% of the average monthly precipitation at this station. At the other end of the spectrum, 77 stations recorded no rain for the month. For the CIMIS network, Santa Monica in Los Angeles County topped the precipitation charts with 0.42 inches for the month. Ninety-five stations in the CIMIS network recorded zero for precipitation for the month. The 8-Station Index for northern California precipitation recorded 0.02 inches in June with two days showing precipitation. On average 1 inch of precipitation is recorded for the 8-Station index in June. This is tied with 1946 as the 4th driest June in the 8-Station index period of record. For the March/April/May/June period, the 8-Station Index recorded its driest total in the period on record with only 3.42 inches recorded. This beat the previous record set in water year 1924 when 3.69 inches were recorded. Statewide, the average precipitation for June was 11% of the long-term average based on the California Data Exchange Center (CDEC) gages. Precipitation percentages by region from the CDEC gages are shown in a table at the end of this document.

In June, the Drought Monitor expanded the depiction of drought conditions in California. The maps for California for May 27, 2008 and June 24, 2008 are shown below. The Drought Monitor maps can be found on the National Drought Mitigation Center's (NDMC) website <http://drought.unl.edu/dm/>. These maps are largely a reflection of precipitation and soil moisture deficit estimates. As of June 24, 2008, the California depiction has 0.2% of the state drought free, 10.6% listed in the D0 – Abnormally Dry, 71.1% listed in the D1 – Moderate Drought, and 18.1% listed in the D2 – Severe Drought category. Maps are updated weekly.

The U.S. Seasonal Drought Outlook for June through August from NOAA depicts California with persisting drought conditions across most of the state. Updates are provided twice per month. Maps and information can be found at http://www.cpc.noaa.gov/products/expert_assessment/seasonal_drought.html.

Outlooks for the water year 2008 water supply index categories can be found in the [executive update of hydrologic conditions](#). As of the June 30, 2008 update, the median Sacramento Basin outlook was critical and the median outlook for the San Joaquin Basin was dry. Statewide water-year runoff is expected to be approximately 60% of average this year. Water supply information for California can be found at http://cdec.water.ca.gov/water_supply.html. A Historical listing of water year categories for both basins can be found at <http://cdec.water.ca.gov/cgi-progs/iodir/WSIHIST>.

ENSO Conditions and Long-Range Outlooks

The El Niño/Southern Oscillation (ENSO) is starting to transition from a La Niña pattern to a neutral pattern. Tropical winds and convection patterns still weakly resemble La Niña conditions as sea surface temperature anomalies continue to change. Equatorial sea surface temperature anomalies for the tropical Pacific for

June fluctuated between 0.5°C and -0.6°C. The March through May 3-month running mean of the Ocean Niño Index was -0.7 which is the 9th consecutive 3-month running mean value to be below the threshold value of -0.5°C. The largest negative value in the series is the Dec/Jan/Feb value of -1.5. Both statistical and dynamical models forecast La Niña conditions transitioning to ENSO neutral conditions through winter of 2009. More information can be found at the Climate Prediction Center's web site:

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/

Updates are posted weekly. The latest three month outlook (July through September) from NOAA indicates above average temperatures for California with the exception of northern and southern coastal locations which are expected to be below normal. For precipitation, below average conditions are forecast for the northern part of the state. Outlook plots and discussions can be found at <http://www.wrcc.dri.edu/longrang/>. General weather information of interest can be found at <http://www.noaawatch.gov/>. For anomaly information please see http://www.wrcc.dri.edu/anom/cal_anom.html.

Agricultural Data

Barley, oats, wheat and winter forage harvest continued during the month of June. Alfalfa fields finished a third cutting and a fourth cutting started. Planting of field crops was winding down. Many varieties of stone fruits and berries were harvested during the month. Figs were harvested in Merced County and pomegranate and persimmon bloom was complete in Tulare County. Nut trees were showing a heavy set. Due to dry conditions, irrigation was widespread. Efforts were also undertaken to control weeds, diseases and insects. Pasture conditions deteriorated further in June necessitating supplemental feeding of livestock. For further crop and livestock information see <http://www.nass.usda.gov/index.asp>

Other Climate Summaries

[California Climate Tracker](#) (new product of Western Region Climate Center)

[Golden Gate Weather Service Climate Summary](#)

[NOAA Monthly State of the Climate Report](#)

Statewide Extremes (CDEC)

High Temperature – 121°F (Squaw Lake, Colorado River Desert)

Low Temperature – 15°F (Casa Vieja Meadows, Tulare)

High Precipitation – 0.71 inches (Gasquet Ranger Station, North Coast)

Low Precipitation – 0 inches (77 stations)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 107.3°F (Salton Sea East, Imperial County)

Low Average Minimum Temperature – 39.1°F (Alturas, Modoc County)

High Precipitation – 0.42 inches (Santa Monica, Los Angeles County)

Low Precipitation – 0 inches (95 stations)

Statewide Precipitation Statistics

Hydrologic Region	Region Weight	Basin Reporting			Stations Reporting			% of Historic Average	
		Basins	Jun	Oct-Jun	Stations	Jun	Oct-Jun	Jun	Oct-Jun
North Coast	0.27	5	5	5	17	9	8	33.2%	88%
SF Bay	0.03	3	2	2	6	3	3	0.0%	87%
Central Coast	0.06	5	4	4	10	5	5	0.0%	92%
South Coast	0.06	5	5	5	15	11	9	1.9%	84%
Sacramento River	0.26	10	7	6	43	25	21	4.5%	76%
San Joaquin River	0.12	8	7	7	27	20	16	1.0%	74%
Tulare Lake	0.07	5	5	5	27	22	19	12.3%	79%
North Lahontan	0.04	6	5	4	14	7	6	4.7%	93%
South Lahontan	0.06	5	4	4	14	4	4	0.0%	82%
Colorado River	0.03	2	1	1	6	1	1	0.0%	130%
Statewide Weighted Average	1	54	45	43	179	107	92	11.4%	83 %

Statewide Mean Temperature Data by Hydrologic Region (degrees F)

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	30	38.0	62.2	91.1
SF Bay	18	47.5	66.5	87.9
Central Coast	32	47.5	65.9	82.6
South Coast	70	49.2	71.0	97.6
Sacramento	90	42.7	67.5	92.4
San Joaquin	76	44.9	67.2	88.5
Tulare Lake	20	34.2	59.7	81.9
North Lahontan	9	34.3	60.7	85.7
South Lahontan	21	40.6	66.0	86.3
Colorado River Desert	23	64.7	87.8	107.6
Statewide Weighted Average	389	42.1	65.8	90.2

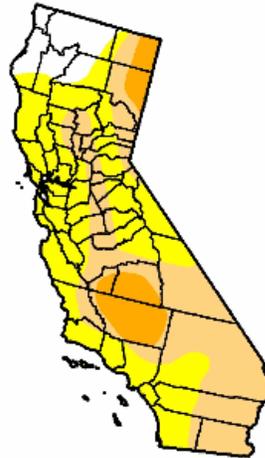
U.S. Drought Monitor

California

May 27, 2008
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	8.9	91.1	47.5	9.3	0.0	0.0
Last Week (05/20/2008 map)	7.8	92.2	48.4	9.3	0.0	0.0
3 Months Ago (03/04/2008 map)	44.5	55.5	34.3	13.3	0.0	0.0
Start of Calendar Year (01/01/2008 map)	8.9	91.1	84.7	58.0	14.6	0.0
Start of Water Year (10/02/2007 map)	0.0	100.0	92.6	64.6	33.8	0.0
One Year Ago (05/29/2007 map)	3.3	96.7	92.3	65.3	34.4	0.0



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements



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Author: David Miskus, JAWF/CPC/NOAA

<http://drought.unl.edu/dm>

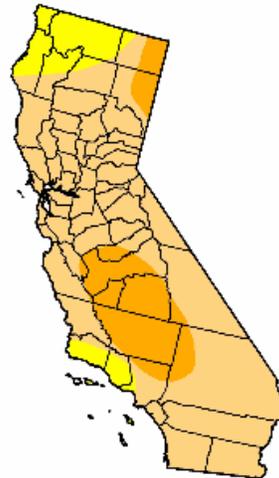
U.S. Drought Monitor

California

June 24, 2008
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.2	99.8	89.2	18.1	0.0	0.0
Last Week (06/17/2008 map)	0.2	99.8	89.2	18.1	0.0	0.0
3 Months Ago (04/01/2008 map)	44.5	55.5	31.6	3.8	0.0	0.0
Start of Calendar Year (01/01/2008 map)	8.9	91.1	84.7	58.0	14.6	0.0
Start of Water Year (10/02/2007 map)	0.0	100.0	92.6	64.6	33.8	0.0
One Year Ago (06/26/2007 map)	0.0	100.0	92.3	65.3	34.3	0.0



Intensity:

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- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

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Author: M. Brewer/L. Love-Brotak, NOAA/NESDIS/NCDC

<http://drought.unl.edu/dm>