

California Monthly Climate Summary October 2008

Weather Highlights

October 2008 began water year 2009 with a storm to begin the month and dry weather following. According to the Western Region Climate Center's [California Climate Tracker](#), the monthly average temperature was 59.5°F which is 1.2°F above the long-term average temperature for the state. With a statewide average of 0.67 inches, precipitation for October was 55% of the long term average. This continues Water Year 2008's streak of above normal temperatures and below normal precipitation.

California started water year 2009 with a storm that dropped measurable precipitation across the entire state with the North Coast receiving the largest amounts. Snow levels fell as low as 6,000 feet providing a nice start to the wet season. The story for the second week of October shifted to winds as cold northerly winds impacted the north part of the state at the beginning of the week and Santa Ana winds impacted the south part of the state at the end of the week. Humidities dropped to single digits and frosts and freeze issues impacted many parts of the state. High pressure dominated the third week of October with Santa Anas continuing in southern California and temperature soaring well above normal. A weak system at the end of the week finally stopped the offshore flow and increased cloudiness over the state. Above normal temperatures continued till the end of the month when another storm system finally made its way into the state.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 101 temperature records tied or broken, and 5 precipitation records tied or broken for the month. Of the 101 temperature records, 46 were for new high maximums and 41 were for new low minimums. On October 3rd, San Francisco Airport (0.12 inches) and Oakland Airport (0.22 inches) set new daily precipitation records followed by Mount Shasta City (0.34 inches), Sacramento Executive Airport (0.17 inches), and Modesto (0.46 inches) on October 5th. The cold temperatures on October 12th set new low minimum temperature records from Eureka, whose 35°F broke the 39°F record set in 2002, to Palmdale, which recorded a low of 31°F breaking the 36°F set in 1969. Bakersfield set a new low maximum temperature on the 12th with a high of only 67°F which broke the 1925 record of 68°F. Long Beach set a new low minimum of 48°F on the 12th which broke the 1960 record of 49°F. This cold was in sharp contrast to October 7th when Long Beach set a new high temperature record of 99°F breaking the old record of 98°F set in 1971. The end of the month was hot too as Palmdale reached 90°F on the 29th tying the mark reached in 2003. Lancaster made it to 89°F on the 29th which broke the old mark of 87°F set in 1952. Bakersfield set a new high minimum temperature record of 61°F on the 31st breaking the old record of 59°F set in 1983.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 123 stations recorded a minimum temperature below freezing,

and 18 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 October fell short of normal again. The largest amount of precipitation recorded in the CDEC precipitation gages for October 2008 was Orland which recorded 8.00 inches. This is over 700% of average for this site for October. At the other end of the spectrum, 21 stations recorded no rain for the month. For the CIMIS network, Moraga in Contra Costa County topped the precipitation charts with 1.96 inches for the month. Thirty stations in the CIMIS network recorded zero for precipitation for the month. The 8-Station Index for northern California precipitation recorded 3.11 inches in October. On average 3.0 inches of precipitation is recorded for the 8-Station index in October. Statewide, the average precipitation for September was 59% 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.

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 October 28, 2008, the California depiction has 0% of the state drought free, 6.4% listed in the D0 – Abnormally Dry, 38% listed in the D1 – Moderate Drought, and 55.6% listed in the D2 – Severe Drought category. Maps are updated weekly.

The U.S. Seasonal Drought Outlook for October through December from NOAA depicts California with persisting drought conditions across most of the state with improvement possible for the northern part of the state based largely on climatology. Updates are provided twice per month. Maps and information can be found at http://www.cpc.noaa.gov/products/expert_assessment/seasonal_drought.html.

ENSO Conditions and Long-Range Outlooks

The El Niño/Southern Oscillation (ENSO) is now in a neutral pattern. Some tropical atmospheric conditions reflect lingering La Nina conditions as sea surface temperature anomalies change. Equatorial sea surface temperature anomalies for the tropical Pacific for the end of October varied between -0.2°C and -0.5°C. The August through October 3-month running mean of the Ocean Niño Index was 0.0. Most statistical and dynamical models forecast ENSO neutral conditions through summer 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 (December through February) from NOAA indicates equal chance for above or below normal temperatures for the entire state of California. For precipitation, equal chance for above or below normal conditions applies across the entire state as well. 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

In October summer harvests continued and fall planting began. Cotton harvest was in full swing. Alfalfa and sunflower seed harvest continued while rice harvests wrapped up. Walnuts, almonds, and pistachio harvests neared completion while desert lemons, olives, avocados, and pomegranates were harvested. Apples, pears, fall pluots, plums, peaches, and nectarines were being picked and packed. Warm temperatures prolonged some summer vegetable harvests. Fall plantings of broccoli and carrots began. Pasture and rangeland conditions remain in poor or very poor conditions necessitating continuation of supplemental feeding. Herd sizes continued to be reduced in some areas due to the drought conditions. Cooler weather increased milk production. Honeybees were moved to wintering grounds. 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 – 109°F (Buttercup, Colorado River Desert)

Low Temperature – -1°F (Sawmill, South Lohantan)

High Precipitation – 8.00 inches (Orland, Sacramento Basin)

Low Precipitation – 0 inches (21 stations)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 94°F (Borrego Springs, San Diego County)

Low Average Minimum Temperature – 27.2°F (Alturas, Modoc County)

High Precipitation – 1.96 inches (Moraga, Contra Costa County)

Low Precipitation – 0 inches (30 stations)

Statewide Precipitation Statistics

Hydrologic Region	Region Weight	Basin Reporting			Stations Reporting			% of Historic Average	
		Basins	Oct	Oct-Oct	Stations	Oct	Oct-Oct	Oct	Oct-Oct
North Coast	0.27	5	5	3	17	11	11	59.5	59
SF Bay	0.03	3	3	3	6	5	5	48.7	49
Central Coast	0.06	5	3	3	10	4	4	37.3	37
South Coast	0.06	5	5	5	15	12	12	8.4	8
Sacramento River	0.26	10	9	9	43	29	29	97.9	98
San Joaquin River	0.12	8	7	7	27	22	22	63.4	63
Tulare Lake	0.07	5	5	5	27	25	25	24.9	25
North Lahontan	0.04	6	6	6	14	10	10	58.1	58
South Lahontan	0.06	5	4	4	14	8	8	33.4	33
Colorado River	0.03	2	2	2	6	4	4	0	0
Statewide Weighted Average	1	54	49	49	179	130	130	59.4	59

Statewide Mean Temperature Data by Hydrologic Region (degrees F)

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	30	32.8	55.5	80.7
SF Bay	18	43.9	61.9	81.7
Central Coast	35	44.4	62.1	82.5
South Coast	67	43.5	68.0	92.7
Sacramento	84	33.9	57.0	81.9
San Joaquin	66	36.1	58.3	81.2
Tulare Lake	14	20.7	51.4	75.4
North Lahontan	28	17.4	44.2	67.8
South Lahontan	20	27.0	54.5	77.6
Colorado River Desert	23	53.7	74.1	95.1
Statewide Weighted Average	385	34.0	57.3	81.3