

California Monthly Climate Summary February 2008

Weather Highlights

February was another colder than normal month for California. According to the Western Region Climate Center's [California Climate Tracker](#), the monthly average temperature was 45.3°F which is 0.7°F lower than the long-term average of 45.9°F. With a statewide average of 2.67 inches, precipitation for February was 76% of the long term average. Out of the 113 years of record in the California Climate Tracker, February 2007 ranks as the 55th wettest.

For the December/January/February (DJF) period, the California Climate Tracker recorded a mean temperature of 42.2°F which is 1.8°F below the long-term average. This is the second DJF period in a row that was below normal and the coldest DJF period since 1993. The statewide average maximum temperature for the DJF period was 2.6°F below the long-term average of 54.6°F and the average minimum temperature was 1.0°F below the long term average of 33.3°F. For precipitation, the DJF period was 103% of the long-term average for the state with 11.68 inches of precipitation. This is a significant improvement over last year's DJF period when less than 8 inches of precipitation fell.

February started with a series of cold, winter storms with snow levels falling below 1000 feet in the northern Sacramento Valley. These storms added to a healthy snowpack. These series of storms persisted into the start of the second week of February. As the last of these storms exited the region, high pressure built over the state leading to drier conditions. Dense fog was an issue in the San Joaquin Valley on the 8th, 9th, 11th, and 12th. The fog was responsible for several chain-reaction accidents on Highway 99 during this time. A few storms passing north of the state caused some isolated shower activity on the north coast as well. The ridge led to warmer than average temperatures for the week for the state in general. A storm in the third week of the month brought rain to Southern California with some areas receiving over an inch of precipitation. Windy conditions followed the storm with another high pressure ridge building in the region. Winds around 50 mph were recorded in the Kern County mountains and deserts at this time. The fourth week of the month saw the storms return to California with a series of storms including a strong storm bringing wind and wet weather on the 23rd and 24th. Snow cover in the Sierra Nevada mountains for the month jumped the most during these storms. Precipitation was statewide during these storms. The month finished with another ridge building into the region.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 23 temperature records tied or broken and 2 precipitation records tied and broken for the month. Of the 23 temperature records, 18 were for new high maximums. The Oxnard National Weather Service office recorded a new high maximum temperature February 9th with a reading of 82°F. This beat the old record set in 1964 by 1°F. Lindbergh Field in San Diego tied a

1907 record with a high temperature of 77°F on February 9th. This year included a leap day and on the 29th, Stockton, Modesto, and Fresno all set new high temperatures with values of 72, 75, and 76°F respectively. Fresno's 76°F tied the 1924 leap day high.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 218 stations recorded a minimum temperature below freezing. 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 February was cold if slightly below average in quantity. The largest amount of precipitation recorded in the CDEC precipitation gages for February 2008 was Bear Trap Meadow in the Kaweah River watershed in the Tulare Basin with 14.71 inches. This is 169% of the average monthly precipitation at this station. At the other end of the spectrum, Imperial Valley in the Colorado River Desert region recorded no precipitation for February. For the CIMIS network, De Laveaga in Santa Cruz County topped the precipitation charts with 6.45 inches for the month. Eleven stations in the CIMIS network recorded zero for precipitation for the month. The 8-Station Index for northern California precipitation recorded 6.9 inches in February with twelve days showing precipitation. On average 8.0 inches of precipitation is recorded for the 8-Station index. This is the 43rd wettest February in the 8-Station index period of record. Statewide, the average precipitation for February was 79% 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 UC Merced/UC Santa Barbara snow covered area reports are back again for 2008. Conditions at the beginning of March 2008 are much different than 2007. A much larger percentage of the Sierra Nevada watersheds are covered by snow in 2008. Lower elevation (5,000 to 6,000 ft) snow coverage for the Feather, American, and Merced watersheds exceeded 29% for 2008 compared to 0% for 2007. The data and analysis from these reports are made available by UC Merced and UC Santa Barbara under NASA Grant NNG04GC52 "REASoN CAN Multi resolution snow products for the hydrologic sciences. Please see the state climatologist web site to for the full report.

For February, the Drought Monitor showed continued improvement across California due to continued precipitation and a further increase in snow pack conditions. The maps for California for January 29, 2008 and March 4, 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. Much of the north half of the state is not considered in any drought condition. The rest of California is depicted in either

D0 (abnormally dry) or D1 (moderate drought) conditions or D2 (severe drought). Maps are updated weekly.

The U.S. Seasonal Drought Outlook for February through April from NOAA depicts California with persisting drought conditions in the Tulare basin and in the southeastern part of the state. Updates are provided twice per month. Maps and information can be found at http://cdec.water.ca.gov/water_supply.html

The February 2008 [Bulletin 120](#) is available. This document reviews snow conditions in California and provides a forecast for April through July runoff for 22 basins. For 2008 the largest percent of average forecast runoff is in the Kaweah River in the Tulare Basin with 112% of average. The lowest forecast runoff is the Tahoe basin with only 80% of average. The Bulletin 120 is issued 4 times a year in February, March, April and May.

Outlooks for the water year 2008 water supply index categories are dry for the Sacramento Basin and below normal for the San Joaquin Basin. 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 being classified as a strong La Niña pattern. Equatorial sea surface temperature anomalies for the tropical Pacific for February fluctuated between 1°C and 2°C. The December through February 3-month running mean of the Ocean Niño Index was the 6th 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. The current La Nina episode is the first officially classified La Nina episode since the Sep/Oct/Nov 2000 to Jan/Feb/Mar 2001 episode. Both statistical and dynamical models forecast La Niña conditions continuing but weakening in the spring of 2008. 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 (March through May) from NOAA indicates an equal chance of above, below or near normal temperatures for most of the state with above normal temperatures expected for southern California except for the south coast which is forecast to have below normal temperatures. For precipitation, below average conditions are forecast for the southern half of the state and an equal chance of above, below or near normal conditions for the northern half. 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

February saw the continuation of positive conditions for crop and rangeland growth. Winter forage crops were doing well with the rains. Winter vegetable crops were harvested and early vegetable crops were growing well. The spring sugar beet crop was growing well too. The almond bloom began in February and some blooming started in the fruit orchards as well. Beehives were moved into the orchards for pollination. Cattle calving and goat kidding occurred in February. Supplemental feeding declined as range conditions improved. For further crop 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 – 91°F (Buttercup, Colorado River Desert)

Low Temperature – -18°F (Casa Vieja Meadows, Tulare)

High Precipitation – 14.71 inches (Bear Trap Meadow, Tulare)

Low Precipitation – 0 inches (Imperial Valley Colorado River Desert)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 74.4°F (Seeley, Imperial County)

Low Average Minimum Temperature – 17°F (Alturas, Modoc County)

High Precipitation – 6.45 inches (De Laveaga, Santa Cruz County)

Low Precipitation – 0 inches (11 stations)

Statewide Precipitation Statistics

Hydrologic Region	Region Weight	Basin Reporting			Stations Reporting			% of Historic Average	
		Basins	Feb	Oct-Feb	Stations	Feb	Oct-Feb	Feb	Oct-Feb
North Coast	0.27	5	5	5	19	10	10	70.9%	102%
SF Bay	0.03	2	2	2	6	6	6	89.6%	111%
Central Coast	0.06	3	3	3	11	7	6	68.8%	116%
South Coast	0.06	3	3	3	15	11	9	74.8%	110%
Sacramento River	0.26	5	5	5	43	33	32	80.7%	95%
San Joaquin River	0.12	6	6	6	25	22	21	98.6%	97%
Tulare Lake	0.07	5	5	5	28	24	24	136.5%	104%
North Lahontan	0.04	3	3	3	14	10	9	100.1%	94%
South Lahontan	0.06	3	3	3	15	10	8	30.6%	106%
Colorado River	0.03	1	1	1	6	3	3	4.5%	111%
Statewide Weighted Average	1	36	36	36	182	136	128	78.8 %	101 %

Statewide Mean Temperature Data by Hydrologic Region (degrees F)

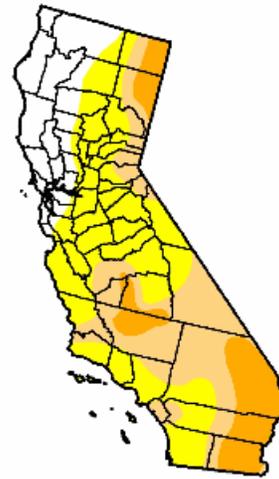
Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	28	26.4	42.3	65.9
SF Bay	19	35.1	47.9	64.1
Central Coast	33	36.4	49.5	67.5
South Coast	70	33.7	50.8	75.0
Sacramento	92	22.7	41.2	66.7
San Joaquin	78	24.4	41.6	64.8
Tulare Lake	18	9.7	34.3	65.3
North Lahontan	31	5.3	29.7	55.1
South Lahontan	21	14.3	36.4	61.9
Colorado River Desert	22	39.4	56.7	76.0
Statewide Weighted Average	412	24.2	42.1	66.2

U.S. Drought Monitor

California

January 29, 2008
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	18.2	81.8	41.6	14.8	0.0	0.0
Last Week (01/22/2008 map)	11.4	88.6	79.8	32.8	0.0	0.0
3 Months Ago (11/06/2007 map)	8.9	91.1	84.8	58.3	33.7	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 (01/30/2007 map)	9.8	90.2	61.3	22.9	0.0	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

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



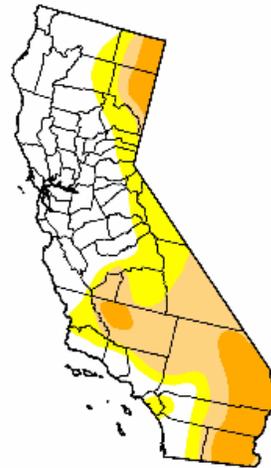
Released Thursday, January 31, 2008
Author: David Miskus, JAWF/CPC/NOAA

U.S. Drought Monitor

California

March 4, 2008
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	44.5	55.5	34.3	13.3	0.0	0.0
Last Week (02/26/2008 map)	44.5	55.5	34.3	13.3	0.0	0.0
3 Months Ago (12/11/2007 map)	8.9	91.1	84.8	58.0	14.6	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 (03/06/2007 map)	25.4	74.6	54.0	28.8	0.0	0.0



Intensity:

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

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



Released Thursday, March 6, 2008
Author: Brian Fuchs, National Drought Mitigation Center