

California Monthly Climate Summary
May 2008

Weather Highlights

May 2008 was a month of extremes that resulted in a near average temperature and below average precipitation. According to the Western Region Climate Center's [California Climate Tracker](#), the monthly average temperature was 61.3°F which is 0.2°F above the long-term average temperature for the state. With a statewide average of 0.44 inches, precipitation for May was 56% of the long term average. While May was the best spring month in terms of precipitation, it wasn't enough to prevent a new extreme. Out of the 114 years of record in the California Climate Tracker, spring (March/April/May) 2008 ranks as the driest.

May started warm and dry. During the first week of May a couple of upper lows moved over the state. Isolated showers on the northeastern plateau were reported with the first one and more widespread thunderstorms over the Sierra accompanied the second. The second week of May continued the pattern of warm and dry offset by the passage of weak lows. Some showers were recorded in the early part of the week. The third week of May brought a significant heat wave as a strong high pressure system built in over northern California before spreading to southern California. A large number of temperature records were set during this period. The fourth week brought an unusually strong late-season storm system with gusty winds. The storm exited the region and then retrograded back into the region bringing showers on its second pass. The month ended with unseasonably cool weather as more low pressure systems crossed the state.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 194 temperature records tied or broken, 10 precipitation records tied or broken, and 1 pressure record set for the month. Of the 194 temperature records, 119 were for new high maximums. Many high temperature records were set during the heat wave from May 15 through May 19. Death Valley set new daily records on the 18th and 19th reaching 120°F on the 19th. This is the earliest date that 120°F has been reached beating the old date of May 25th set back in 1913. Eureka set a new daily high maximum temperature record on the 16th with a reading of 83°F. This beat the old record of 77°F set in 1956. High temperatures weren't the only records set during the heat wave. On the night of May 15th, Sacramento tied a 1910 record for a high minimum temperature with a reading of 69°F. Red Bluff set a new high minimum temperature record with a 75°F reading which broke the old record of 67°F set in 1987. The one pressure record for the month was set on May 23rd in Sacramento. At approximately 5 am the pressure dipped to 29.36 inches. This is the lowest May pressure reading since 1949 when a value of 29.50 inches was reached.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 125 stations recorded a minimum temperature below freezing. Fifty-six 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 May was better than March or April, but still below normal. The largest amount of precipitation recorded in the CDEC precipitation gages for May 2008 was Caples Lake in the Sacramento Basin with 2.62 inches. This is 115% of the average monthly precipitation at this station. At the other end of the spectrum, 11 stations recorded no rain for the month. For the CIMIS network, Alturas in Modoc County topped the precipitation charts with 3.09 inches for the month. Fifty-five stations in the CIMIS network recorded zero for precipitation for the month. The 8-Station Index for northern California precipitation recorded 1.11 inches in May with nine days showing precipitation. On average 2.1 inches of precipitation is recorded for the 8-Station index in May. This is the 27th driest May in the 8-Station index period of record. For the March/April/May period, both the California Climate Tracker and the 8-Station Index recorded their driest periods on record. The California Climate Tracker recorded 1.21 inches for the period or only 22 percent of the 1895-2008 period of record. For the 8-station index, only 3.4 inches was recorded. This beat the previous record set in water year 1924 when 3.61 inches were recorded. Statewide, the average precipitation for May was 71% 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 May, the Drought Monitor showed no real changes to the depiction of drought conditions in California. The maps for California for May 6, 2008 and May 27, 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 May 27, 2008, the California depiction has 8.9% of the state drought free, 43.1% listed in the D0 – Abnormally Dry, 38.2% listed in the D1 – Moderate Drought, and 9.3% 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 or developing 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 3, 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. While tropical winds and convection patterns still resemble La Niña conditions, sea surface temperature anomalies are changing. Equatorial sea surface temperature anomalies for the tropical Pacific for May fluctuated between 0°C and -1°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 for the summer 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 (May through July) from NOAA indicates above average temperatures for California with the exception of coastal locations. 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 took place during the month of May. Alfalfa fields went through a second and third cutting during the month. Further planting of crops such as corn and cotton took place. Many varieties of stone fruits and berries were harvested during the month. Grape vines were forming bunches and the olive bloom was ending. Nut trees were showing a heavy set. A heavy walnut crop was expected for those areas that escaped frost damage. A record almond crop is expected in some areas. Due to dry conditions, irrigation was widespread. Efforts were also undertaken to control weeds, diseases and insects. Pasture conditions deteriorated in May necessitating supplemental feeding of livestock. Fire danger remained high. 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 – 115°F (Rice Valley, Colorado River Desert)

Low Temperature – 11°F (Charlotte Lake, Tulare)

High Precipitation – 2.62 inches (Caples Lake, Sacramento Basin)

Low Precipitation – 0 inches (11 stations)

Statewide Extremes (CIMIS)

High Average Maximum Temperature –92.3⁰F (UC San Luis, Imperial County)

Low Average Minimum Temperature – 30.8⁰F (Big Bear Lake, San Bernadino County)

High Precipitation – 3.09 inches (Alturas, Modoc County)

Low Precipitation – 0 inches (55 stations)

Statewide Precipitation Statistics

Hydrologic Region	Region Weight	Basin Reporting			Stations Reporting			% of Historic Average	
		Basins	May	Oct-May	Stations	May	Oct-May	May	Oct-May
North Coast	0.27	5	5	5	17	13	12	43.3%	90%
SF Bay	0.03	3	3	3	6	4	4	8.2%	87%
Central Coast	0.06	5	5	5	10	6	6	24.4%	80%
South Coast	0.06	5	5	5	15	10	9	141.4%	84%
Sacramento River	0.26	10	9	9	43	38	33	65.5%	78%
San Joaquin River	0.12	8	7	7	27	23	21	74.2%	74%
Tulare Lake	0.07	5	5	5	27	24	22	92.5%	82%
North Lahontan	0.04	6	6	6	14	9	9	133.2%	82%
South Lahontan	0.06	5	4	4	14	9	8	109%	84%
Colorado River	0.03	2	2	2	6	4	4	175%	106%
Statewide Weighted Average	1	54	51	51	179	140	128	71.4 %	83 %

Statewide Mean Temperature Data by Hydrologic Region (degrees F)

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	33	33.4	55.9	90.0
SF Bay	19	44.4	60.1	83.2
Central Coast	34	42.6	57.3	78.3
South Coast	71	42.5	60.2	91.4
Sacramento	93	35.3	58.6	90.5
San Joaquin	77	38.7	58.3	84.5
Tulare Lake	14	28.1	49.5	80.8
North Lahontan	30	22.3	45.9	75.5
South Lahontan	22	32.9	54.7	82.2
Colorado River Desert	23	54.8	74.6	96.1
Statewide Weighted Average	416	35.7	57.0	87.1

U.S. Drought Monitor

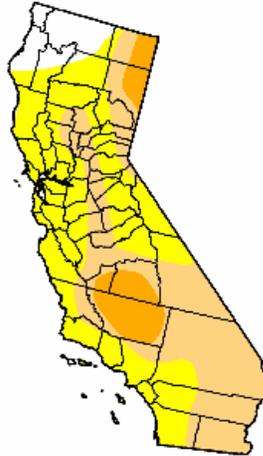
California

May 6, 2008
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	7.7	92.3	48.4	9.3	0.0	0.0
Last Week (04/29/2008 map)	7.3	92.7	45.7	9.3	0.0	0.0
3 Months Ago (02/12/2008 map)	18.3	81.7	37.4	14.1	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 (05/08/2007 map)	7.5	92.5	82.4	51.6	28.7	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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<http://drought.unl.edu/dm>

U.S. Drought Monitor

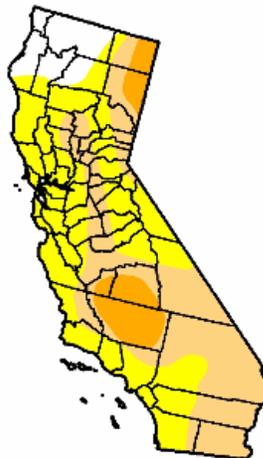
California

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:

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- D3 Drought - Extreme
- D4 Drought - Exceptional



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