

California Monthly Climate Summary
August 2015

Weather Highlights

August 2015 was a warm, dry month for California. According to the Western Region Climate Center's [California Climate Tracker](#), the monthly average temperature was 74.0°F which is 2.1°F higher than the long-term average. With a statewide average of 0.04 inches, precipitation was 14% of average. Statewide plots of precipitation and temperature for the past month are included at the end of the document.

August began with high pressure over the Great Basin which prevented cool Pacific air from penetrating inland. Temperatures over 100 degrees were common in the Central Valley. San Francisco saw highs in the 90s. Temperatures backed off to near seasonal values in the second week with a few areas seeing some limited rainfall. Hot dry weather continued in the second half of the month with high pressure in the Great Basin limiting coastal fog events. Mountain nighttime temperatures dropped to near freezing at the higher elevations near the end of the month.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 143 temperature records tied or broken and 2 precipitation records set for the month. Of the 143 temperature records set, 85 were for new high maximum temperatures and 57 were for new high minimum temperatures. Records were set on 19 days of the month with 12 of those days coming from the San Francisco Forecast Area. San Francisco downtown set new high minimum temperature records on 10 of those days.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 10 stations recorded a minimum temperature below freezing while 113 stations reached or exceeded 100°F at least once during the month. 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 stations is also shown at the end of the summary.

Precipitation in August was below average in all but one of the hydrologic regions (North Coast at 104%). For the CDEC precipitation gages for August 2015, the largest amount of precipitation recorded was at Gasquet Ranger Station on the North Coast with 1.16 inches. This is 171% of the average precipitation for this station the month. At the other end of the spectrum, 61 stations recorded no precipitation for the month. For the CIMIS network, Moorpark in Ventura County topped the precipitation charts with 2.95 inches for the month and 82 stations recorded no precipitation. Some CIMIS gages may show large precipitation totals if the gages are not covered during irrigation activities so care should be given to review precipitation data used from this network. The 8-Station Index for northern California precipitation recorded 0.1 inches in August. On average, 0.3 inches of precipitation is recorded for the 8-Station index for the month. The San Joaquin 5-Station Index recorded 0 inches of precipitation for

the month. On average, 0.2 inches of precipitation is recorded for the 5-Station Index for the month. The Tulare Basin 6-Station Index recorded 0 inches of precipitation for the month. On average, 0.2 inches of precipitation is recorded.

CoCoRaHS Update

Water Year 2015 continues California's sixth year with CoCoRaHS – the Community Collaborative Rain, Hail and Snow Network. This group uses citizen volunteers to record rain, hail and snow data. The users enter the data online at the CoCoRaHS web site. The web site provides the opportunity to see spatial detail of rain and snow patterns. A map from August 29, 2015 is shown at the end of the document. As of the end of July, California has 1307 volunteers signed up spanning 55 of California's 58 counties. The counties without volunteers are Alpine, Glenn, and Modoc. The counties with the most volunteers are San Diego County with 112 volunteers and Sonoma County with 111. For the month of August, 9,946 reports were recorded for California. The largest daily rain total for CoCoRaHS- CA in August was in Del Norte County on 8/29/2015 where 1.25 inches was recorded. There were no reports of snowfall recorded during the month. There were no hail reports for the month. To join CoCoRaHS or find more information, please visit <http://www.cocorahs.org>.

Snowpack and Water Supply Conditions

As of May 26, 2015, the regional snow pillow report shows no snow in any of the regions. The Water Supply Index (WSI) for WY2015 for the Sacramento Basin and the San Joaquin Basin are in the critical category. More information can be found at <http://cdec.water.ca.gov/watersupply.html>. A historical listing of water year categories for both basins can be found at <http://cdec.water.ca.gov/cgi-progs/iodir/WSIHIST>. A table showing end-of-August reservoir storage by hydrologic region is shown at the end of this document. For more information on water conditions in California, visit <http://www.water.ca.gov/waterconditions/>.

Drought Monitor and Seasonal Outlook

The maps for California for July 28, 2015 and August 25, 2015 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 the August 25th depiction, 46% of California is depicted in the D4 or exceptional drought category, 25.08% of California is depicted in the D3 or extreme drought category, and 21.28% of California is depicted in D2 or severe drought category, 4.99% of California is depicted in D1 or moderate drought, 2.51% depicted in abnormally dry or D0, and 0.14% with no drought depiction. Maps are updated weekly.

The U.S. Monthly Drought Outlook for September from NOAA depicts California in persisting drought conditions. This forecast is based primarily on climatology and forecast models. Maps and information can be found at http://www.cpc.noaa.gov/products/expert_assessment/seasonal_drought.html. Updates are provided twice per month.

ENSO Conditions and Long-Range Outlooks

The El Niño/Southern Oscillation (ENSO) is currently in El Niño conditions. Equatorial sea surface temperature anomalies for the tropical Pacific have been positive with values of 2.2°C in the Niño 3.4 at the end of August. The June through August 3-month running mean of the Ocean Niño Index (ONI) is 1.2 which is now the 5th 3-month running mean value above the 0.5 threshold for an El Niño event using the Climate Prediction Center's recomputed ONI time series. Five consecutive ONI values need to be above the 0.5 threshold need to be observed for classification as an El Niño event. Most forecast models have the tropical sea surface remaining warm into the winter and subsequent spring. 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. 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

August 2015 saw more harvest and management of crops in California. Alfalfa was irrigated, cut and baled. Safflower was harvested while Sudan silage harvest finished. Grape harvest began in some regions with excellent yields reported. Stone fruit harvest continued while citrus groves were prepared for next season. Almond tree shaking began while walnuts were treated for pests. Summer vegetable harvest began to wind down and processing tomato harvest neared completion. Pumpkins were maturing. Rangeland conditions and fire danger were unfavorable with forage very poor at lower elevations. Supplemental feeding costs continued to be high. Diaries were using all methods to keep cows cool. 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 – 120°F (Buttercup, Colorado River)

Low Temperature – 9°F (Casa Vieja Meadows, Tulare)

High Precipitation – 1.16 inches (Gasquet Ranger Station, North Coast)

Low Precipitation – 0 inches (61 stations)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 108.9 °F (Meloland, Imperial County)

Low Average Minimum Temperature – 42.0°F (Big Bear Lake, San Bernardino County)

High Precipitation – 2.95 inches (Moorpark, Ventura County)*

Low Precipitation – 0 inches (82 stations)

*Sometimes irrigation water from sprinklers gets counted as precipitation if the gage is not covered.

Statewide Mean Temperature Data by Hydrologic Region (degrees F)

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	27	46.2	68.6	96.8
SF Bay	9	52.9	68.7	98.0
Central Coast	13	52.5	71.7	99.2
South Coast	46	53.2	76.2	101.2
Sacramento	77	49.2	71.4	96.1
San Joaquin	44	50.6	69.7	93.0
Tulare Lake	19	46.0	66.8	108.0
North Lahontan	19	39.2	59.9	80.1
South Lahontan	17	45.2	67.2	88.2
Colorado River Desert	8	70.1	93.0	112.4
Statewide Weighted Average	279	48.9	70.3	96.7

Statewide Precipitation Statistics

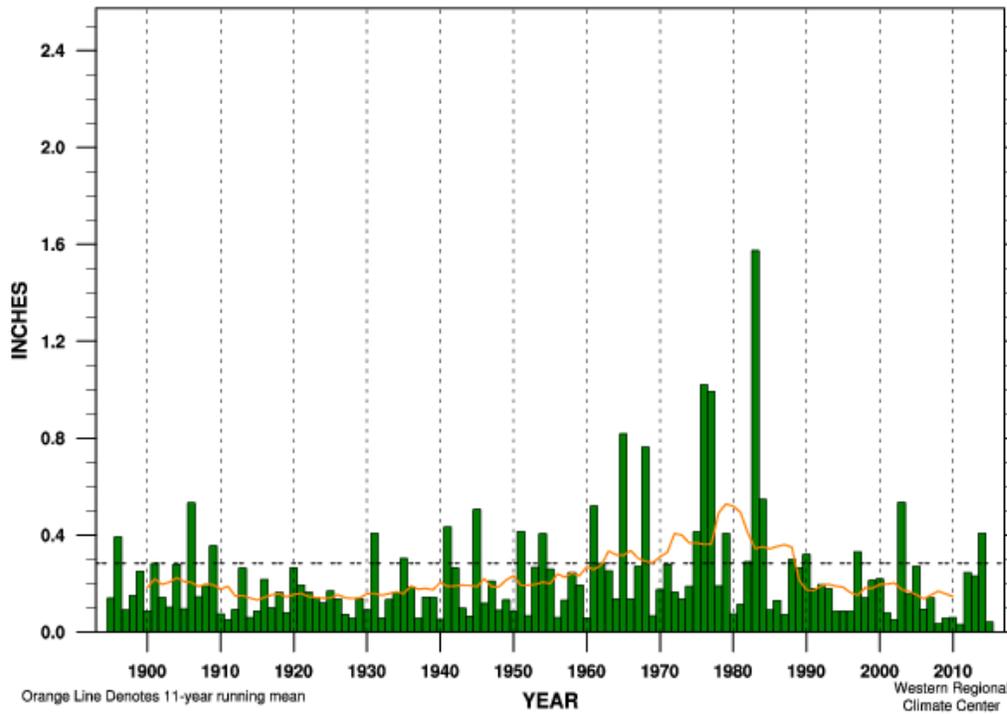
Hydrologic Region	Region Weight	Basin Reporting			Stations Reporting			% of Historic Average	
		Basins	Aug	Oct-Aug	Stations	Aug	Oct-Aug	Aug	Oct-Aug
North Coast	0.27	5	4	4	17	8	7	104.00%	83%
SF Bay	0.03	2	2	2	6	4	3	30.90%	86%
Central Coast	0.06	3	3	3	11	6	6	13.20%	77%
South Coast	0.06	3	3	3	14	10	8	5.90%	69%
Sacramento River	0.26	5	5	5	42	26	24	20.40%	76%
San Joaquin River	0.12	6	6	6	24	15	13	35.40%	60%
Tulare Lake	0.07	5	5	5	29	23	16	16.40%	58%
North Lahontan	0.04	3	3	3	13	6	5	67.60%	85%
South Lahontan	0.06	3	3	3	15	11	11	9.50%	74%
Colorado River	0.03	1	1	1	6	2	2	4.10%	59%
Statewide Weighted Average	1	36	35	35	177	111	95	44.25%	74.4%

End-of-August Reservoir Storage by Hydrologic Region
Storage in Thousand Acre-Feet (taf)

End-of-Month Reservoir Storage	Number of Reservoirs	Average Storage (taf)	2015 Storage (taf)	% of Average
North Coast	6	2,151	943	44%
San Francisco Bay	17	444	422	95%
Central Coast	6	578	153	26%
South Coast	29	1,367	932	68%
Sacramento	43	10,621	6,688	63%
San Joaquin	34	6,771	3,072	45%
Tulare	6	786	275	35%
North Lahontan	5	574	47	8%
South Lahontan	8	292	227	78%
Total	154	23,587	12,761	54%

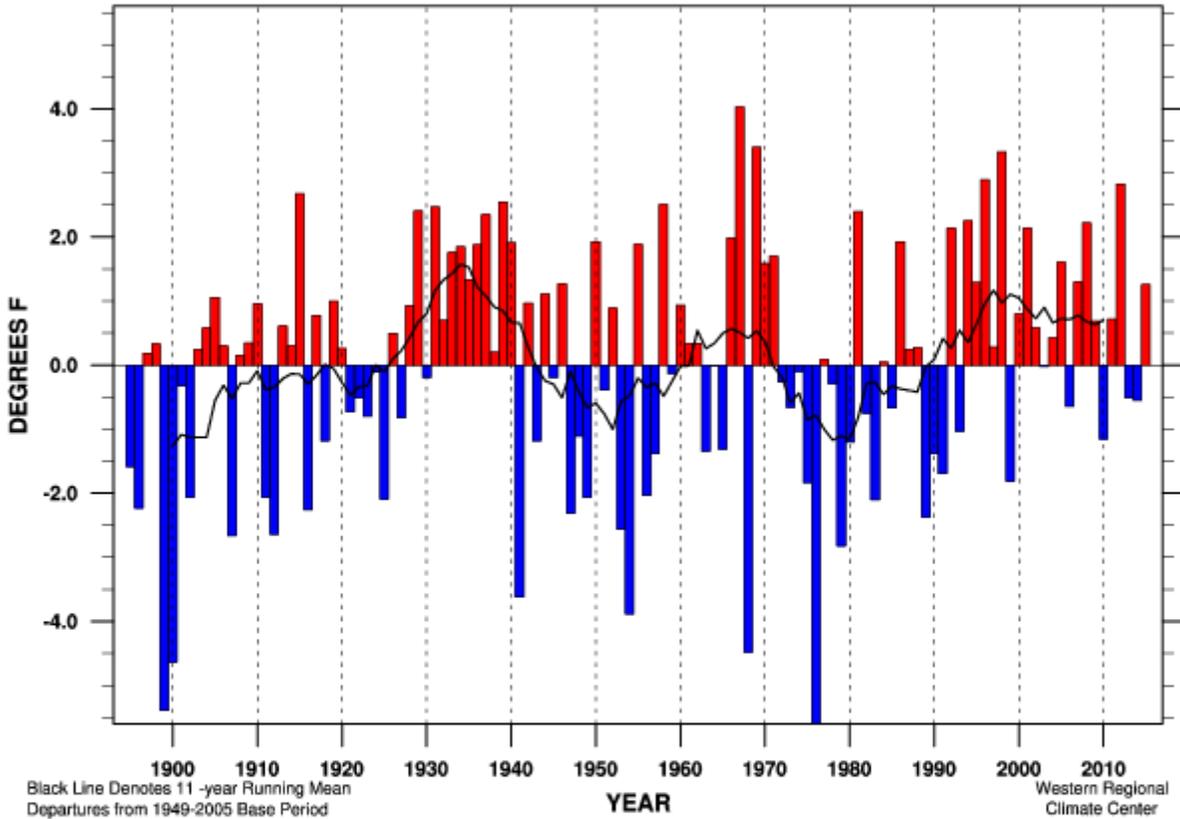
California Climate Tracker Images

California Statewide Precipitation August



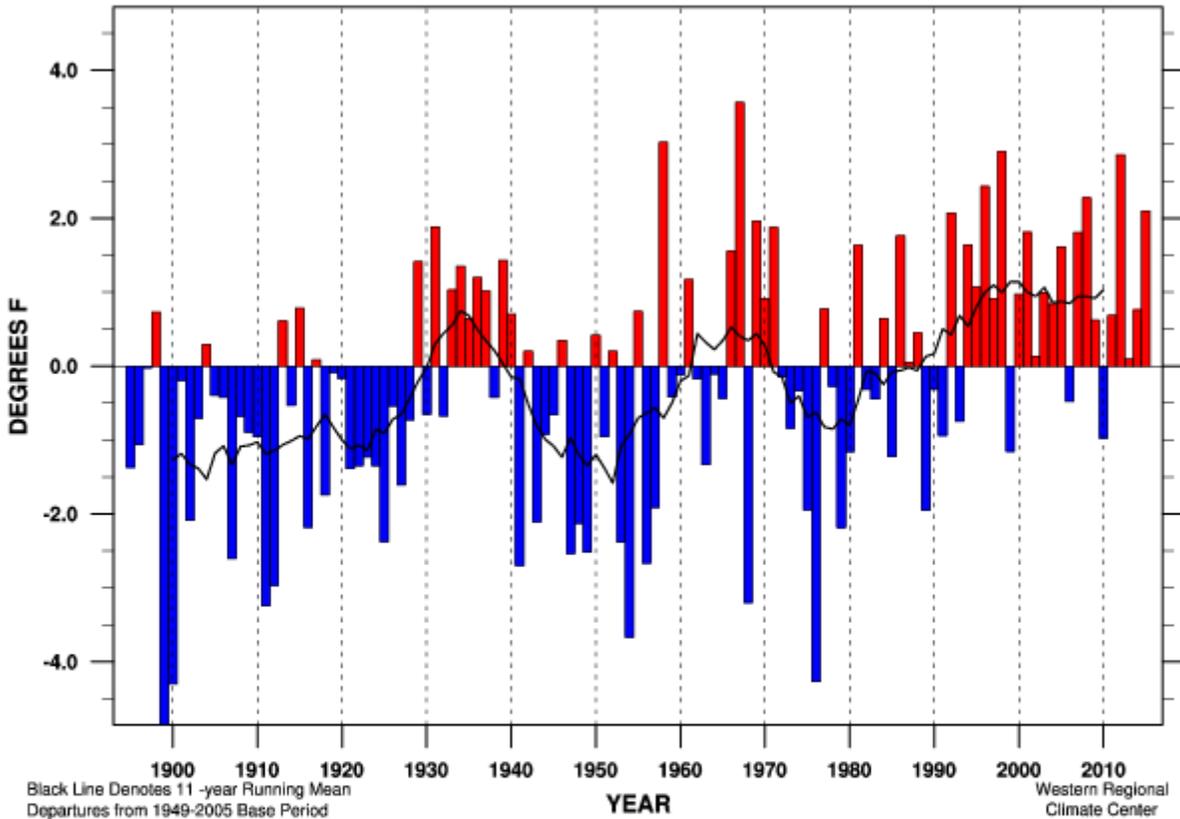
Linear Trend 1895-present	+ 0.06 ± 0.11 in.	(+ 21 ± 38%) per 100 yr	
Linear Trend 1949-present	- 0.19 ± 0.33 in.	(- 67 ± 116%) per 100 yr	
Linear Trend 1975-present	- 1.07 ± 0.74 in.	(- 377 ± 261%) per 100 yr	
Wettest Year	1.57 in. (555%)	in 1983	MEAN 0.28 in.
Driest Year	0.03 in. (12%)	in 2008	STDEV 0.28 in.
August 2015	0.04 in. (14%)		RANK 3 of 121

California Statewide Maximum Temperature Departure August



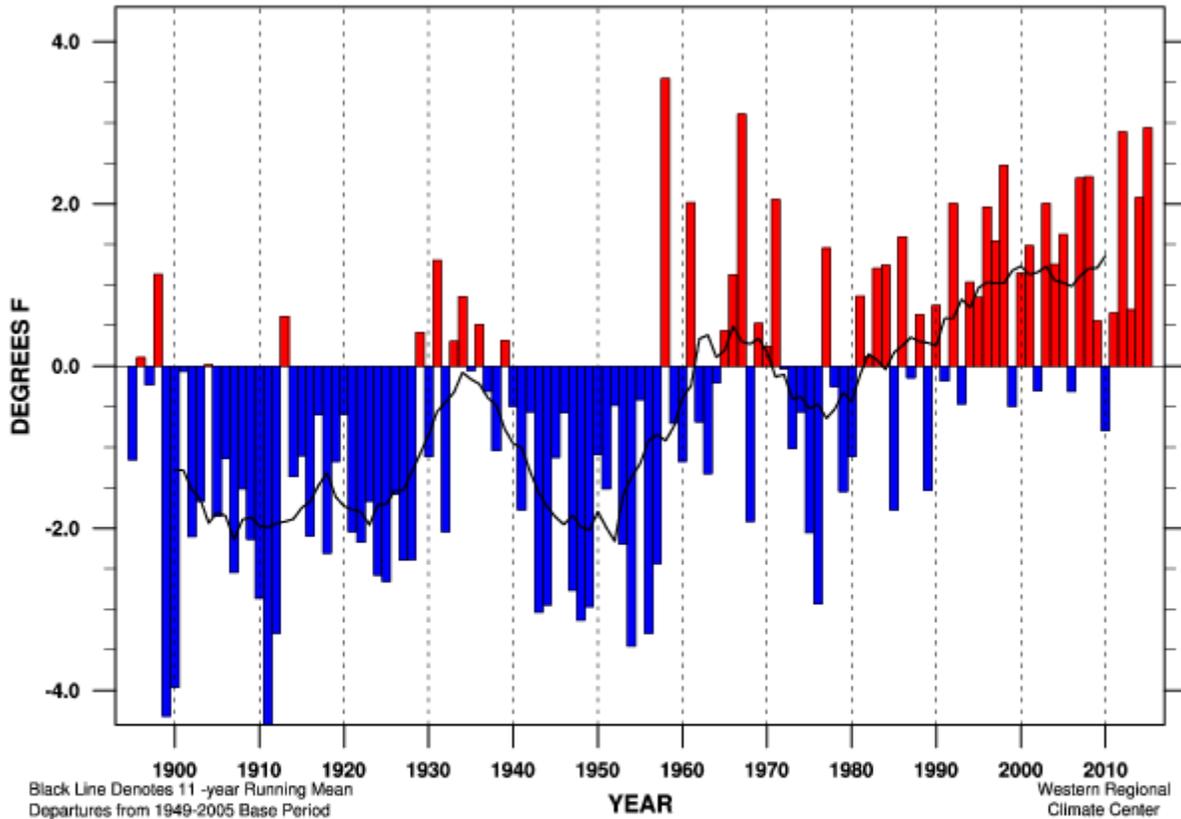
Linear Trend 1895-present	+ 0.94 ± 0.94 °F/100yr	
Linear Trend 1949-present	+ 1.96 ± 2.37 °F/100yr	
Linear Trend 1975-present	+ 6.25 ± 4.46 °F/100yr	
Warmest Year	91.2 °F (+ 4.0 °F) in 1967	MEAN 87.2 °F
Coldest Year	81.6 °F (- 5.6 °F) in 1976	STDEV 1.98 °F
August	2015 88.5 °F (+ 1.3 °F)	RANK 90 of 121

California Statewide Mean Temperature Departure August



Linear Trend 1895-present	+ 1.85 ± 0.77 °F/100yr	
Linear Trend 1949-present	+ 3.18 ± 1.96 °F/100yr	
Linear Trend 1975-present	+ 6.28 ± 3.58 °F/100yr	
Warmest Year	75.4 °F (+ 3.6 °F) in 1967	MEAN 71.9 °F
Coldest Year	67.0 °F (- 4.9 °F) in 1899	STDEV 1.68 °F
August	2015 74.0 °F (+ 2.1 °F)	RANK 115 of 121

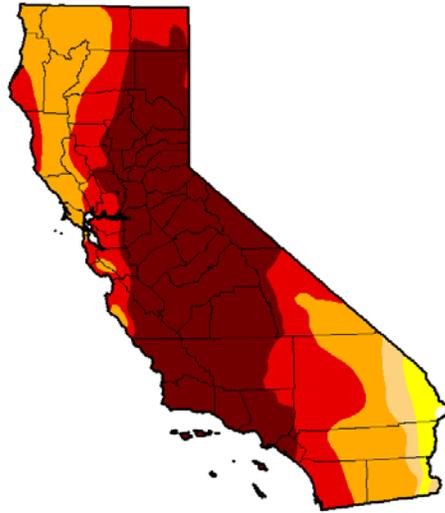
California Statewide Minimum Temperature Departure August



Linear Trend 1895-present	+ 2.76 ± 0.73 °F/100yr	
Linear Trend 1949-present	+ 4.40 ± 1.79 °F/100yr	
Linear Trend 1975-present	+ 6.30 ± 3.22 °F/100yr	
Warmest Year	60.1°F (+ 3.5 °F) in 1958	MEAN 56.5 °F
Coldest Year	52.1°F (- 4.4 °F) in 1911	STDEV 1.62 °F
August	2015 59.5 °F (+ 2.9 °F)	RANK 119 of 121

United States Drought Monitor

U.S. Drought Monitor California



July 28, 2015
(Released Thursday, Jul. 30, 2015)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.14	99.86	97.35	94.59	71.08	46.00
Last Week 7/21/2015	0.14	99.86	97.35	94.59	71.08	46.00
3 Months Ago 4/28/2015	0.14	99.86	98.11	93.44	66.60	46.77
Start of Calendar Year 1/1/2015	0.00	100.00	98.12	94.34	77.94	32.21
Start of Water Year 8/1/2014	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago 7/28/2014	0.00	100.00	100.00	100.00	81.89	58.41

Intensity:



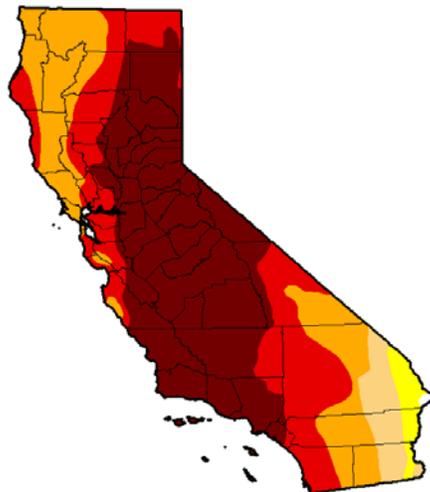
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor California



August 25, 2015
(Released Thursday, Aug. 27, 2015)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.14	99.86	97.35	92.36	71.08	46.00
Last Week 8/18/2015	0.14	99.86	97.35	92.36	71.08	46.00
3 Months Ago 5/25/2015	0.14	99.86	98.71	93.91	66.60	46.73
Start of Calendar Year 1/1/2015	0.00	100.00	98.12	94.34	77.94	32.21
Start of Water Year 8/1/2014	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago 8/25/2014	0.00	100.00	100.00	95.42	81.92	58.41

Intensity:



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

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<http://droughtmonitor.unl.edu/>