

California Monthly Climate Summary
May 2015

Weather Highlights

May 2015 was a slightly cool and dry month for California. According to the Western Region Climate Center's [California Climate Tracker](#), the monthly average temperature was 58.9°F which is 0.7°F lower than the long-term average. With a statewide average of 0.77 inches, precipitation was 86% of average. Statewide plots of precipitation and temperature for the past month are included at the end of the document.

May started out warm and dry with desert regions reaching temperatures over 100°F and over 90°F in parts of the Central Valley. Temperatures cooled off notably the second week of May with overnight frost a concern on Thursday in parts of the Central Valley as an upper level low crossed the State. Precipitation was variable across the State. The unsettled pattern continued into the third week with cooler than average temperatures and spotty precipitation with some snow at the higher elevations. Temperatures warmed into the latter part of May with scattered showers continuing in some locations. The month closed out with a return of hot temperatures and dry weather.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 42 temperature records tied or broken and 24 precipitation record set for the month. Of the 42 temperature records set, 26 were for new low maximum temperatures and 12 were for new high minimum temperatures. Records were set on 10 days of the month with 8 of those days coming from the San Diego Forecast Area.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 124 stations recorded a minimum temperature below freezing while 10 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 May was below average in 5 of the hydrologic regions and above average in the other 5. For the CDEC precipitation gages for May 2015, the largest amount of precipitation recorded was at Bodie in the North Lahontan region with 6.06 inches. This is 673% of the average precipitation for this station the month. At the other end of the spectrum, five stations recorded no precipitation for the month. For the CIMIS network, Alturas in Modoc County topped the precipitation charts with 3.65 inches for the month and 21 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 1.2 inches in May.

On average, 2.1 inches of precipitation is recorded for the 8-Station index for the month. The San Joaquin 5-Station Index recorded 1.4 inches of precipitation for the month. On average, 1.8 inches of precipitation is recorded for the 5-Station Index for the month.

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 May 15, 2015 is shown at the end of the document. As of the end of May, California has 1295 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 Sonoma County with 111 volunteers and San Diego County with 110. For the month of May, 12,781 reports were recorded for California. The largest daily rain total for CoCoRaHS- CA in May was in Sacramento County where 2.64 inches was recorded on 05/15/2015. There were 16 reports of snowfall recorded during the month with the largest daily snowfall recorded in Mono County with 14 inches recorded on 05/8/2015. There were 2 hail reports filed with one in Kern County on 5/7/2015 and one in Tehama County on 5/12/2015. 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-May reservoir storage by hydrologic region is shown at the end of this document.

Drought Monitor and Seasonal Outlook

The maps for California for April 28, 2015 and May 26, 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 May 26 depiction, 46.73% of California is depicted in the D4 or exceptional drought category, 19.87% of California is depicted in the D3 or extreme drought category, and 27.31% of California is depicted in D2 or severe drought category, 4.8% of California is depicted in D1 or moderate drought, 1.15% depicted in abnormally dry or D0, and 0.14% with no drought depiction. Maps are updated weekly.

The U.S. Monthly Drought Outlook for June 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.

For more information on water conditions in California, visit <http://www.water.ca.gov/waterconditions/>.

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 1.2°C in the Niño 3.4 at the end of May. The March through May 3-month running mean of the Ocean Niño Index (ONI) is 0.7 which is the 7th 3-month running mean value above the 0.5 threshold for an El Niño event. 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 summer. 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

May 2015 saw the winter forage crops harvested and baled. The planting of rice neared completion by the end of the month. Corn and cotton crops progressed nicely. Sunflower and safflower fields developed with some bloom occurring. Berries started to fruit and were harvested with blueberries showing good quality. Nut orchards were irrigated and sprayed for pests. Asparagus harvest neared completion while tomato crops were planted. Rangeland continued its decline in nutritional value resulting in supplemental feeding and herd culling. 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 – 107°F (Rice Valley, Colorado Desert)

Low Temperature – -1°F (Casa Vieja Meadows, Tulare)

High Precipitation – 6.06 inches (Bodie, North Lahontan)

Low Precipitation – 0 inches (5 stations)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 89.7 °F (Cadiz Valley, San Bernardino County)

Low Average Minimum Temperature – 29.4°F (Big Bear Lake, San Bernardino County)

High Precipitation – 3.65 inches (Alturas, Modoc County)*

Low Precipitation – 0 inches (21 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	28	34.4	55.5	83.4
SF Bay	9	41.3	54.4	81.7
Central Coast	13	37.5	56.3	85.8
South Coast	48	39.4	58.3	89.7
Sacramento	78	35.6	56.5	83.1
San Joaquin	46	32.3	51.8	81.5
Tulare Lake	19	25.3	45.5	74.4
North Lahontan	27	26.3	44.5	71.4
South Lahontan	17	25.7	48.7	79.1
Colorado River Desert	6	48.8	75.5	104.0
Statewide Weighted Average	291	34.1	54.6	82.8

Statewide Precipitation Statistics

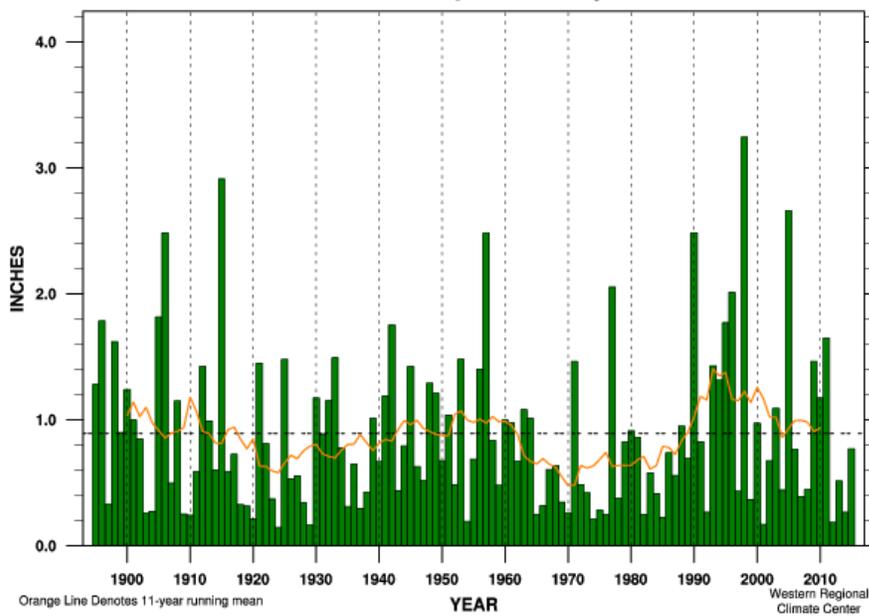
Hydrologic Region	Region Weight	Basin Reporting			Stations Reporting			% of Historic Average	
		Basins	May	Oct-May	Stations	May	Oct-May	May	Oct-May
North Coast	0.27	5	3	3	15	5	5	37.0%	78%
SF Bay	0.03	3	3	3	6	3	3	34.6%	85%
Central Coast	0.06	5	3	3	10	3	3	34.7%	83%
South Coast	0.06	5	5	5	14	10	9	355%	62%
Sacramento River	0.26	10	8	7	42	25	24	77.6%	81%
San Joaquin River	0.12	7	7	7	26	13	10	77.4%	61%
Tulare Lake	0.07	5	4	4	28	11	10	181%	58%
North Lahontan	0.04	6	4	4	13	8	7	344%	84%
South Lahontan	0.06	5	4	4	14	8	8	131%	81%
Colorado River	0.03	2	2	2	6	3	3	2104%	75%
Statewide Weighted Average	1	53	43	42	174	89	82	161%	75.2%

**End-of-May 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	2,550	1,354	53%
San Francisco Bay	17	515	462	90%
Central Coast	6	694	189	27%
South Coast	29	1,515	914	60%
Sacramento	43	13,519	9,056	67%
San Joaquin	34	8,303	4,480	54%
Tulare	6	1,366	491	36%
North Lahontan	5	653	58	9%
South Lahontan	8	269	232	86%
Total	154	29,387	17,240	59%

California Climate Tracker Images

**California Statewide
Precipitation May**

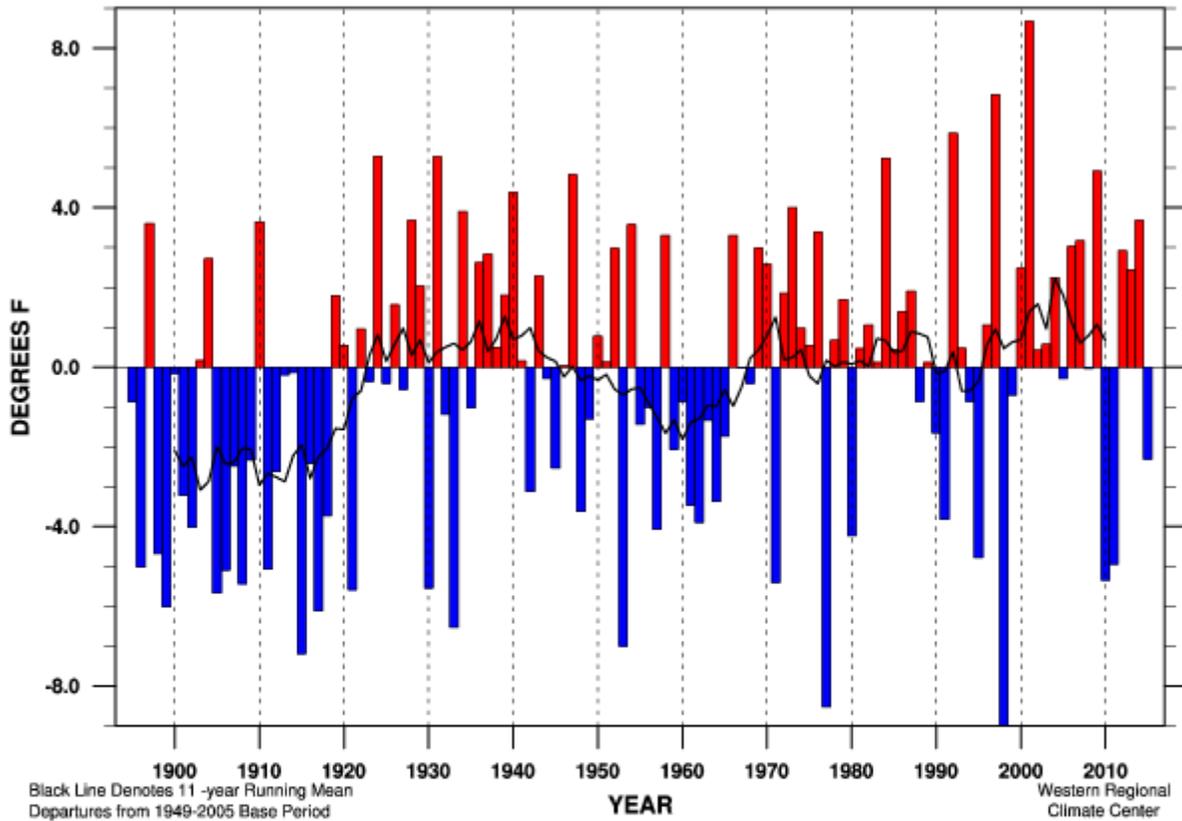


Orange Line Denotes 11-year running mean

Western Regional Climate Center

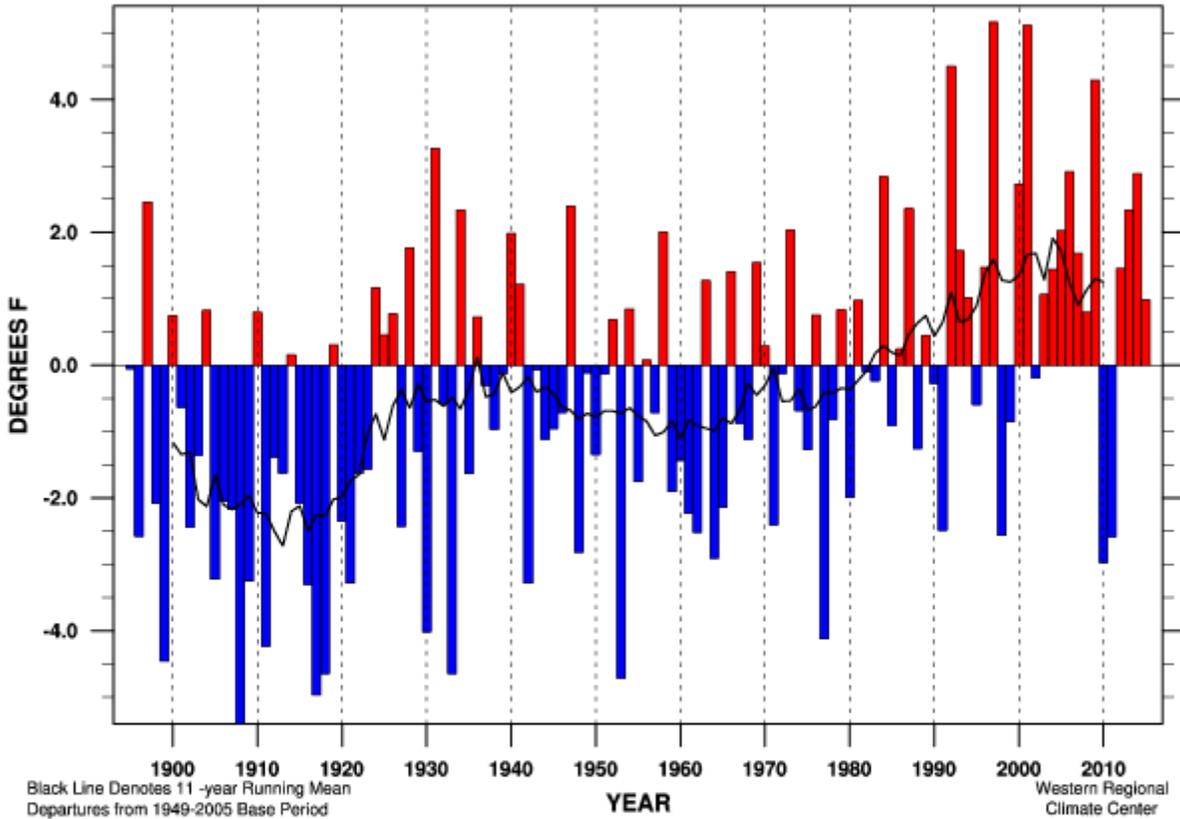
Linear Trend 1895-present	- 0.01 ± 0.32 in.	(- 1 ± 35%) per 100 yr	
Linear Trend 1949-present	+ 0.23 ± 0.83 in.	(+ 25 ± 93%) per 100 yr	
Linear Trend 1975-present	+ 0.48 ± 1.97 in.	(+ 53 ± 220%) per 100 yr	
Wettest Year	3.24 in. (363%) in 1998		MEAN 0.89 in.
Driest Year	0.15 in. (16%) in 1924		STDEV 0.68 in.
May	2015	0.77 in. (86%)	RANK 65 of 121

California Statewide Maximum Temperature Departure May



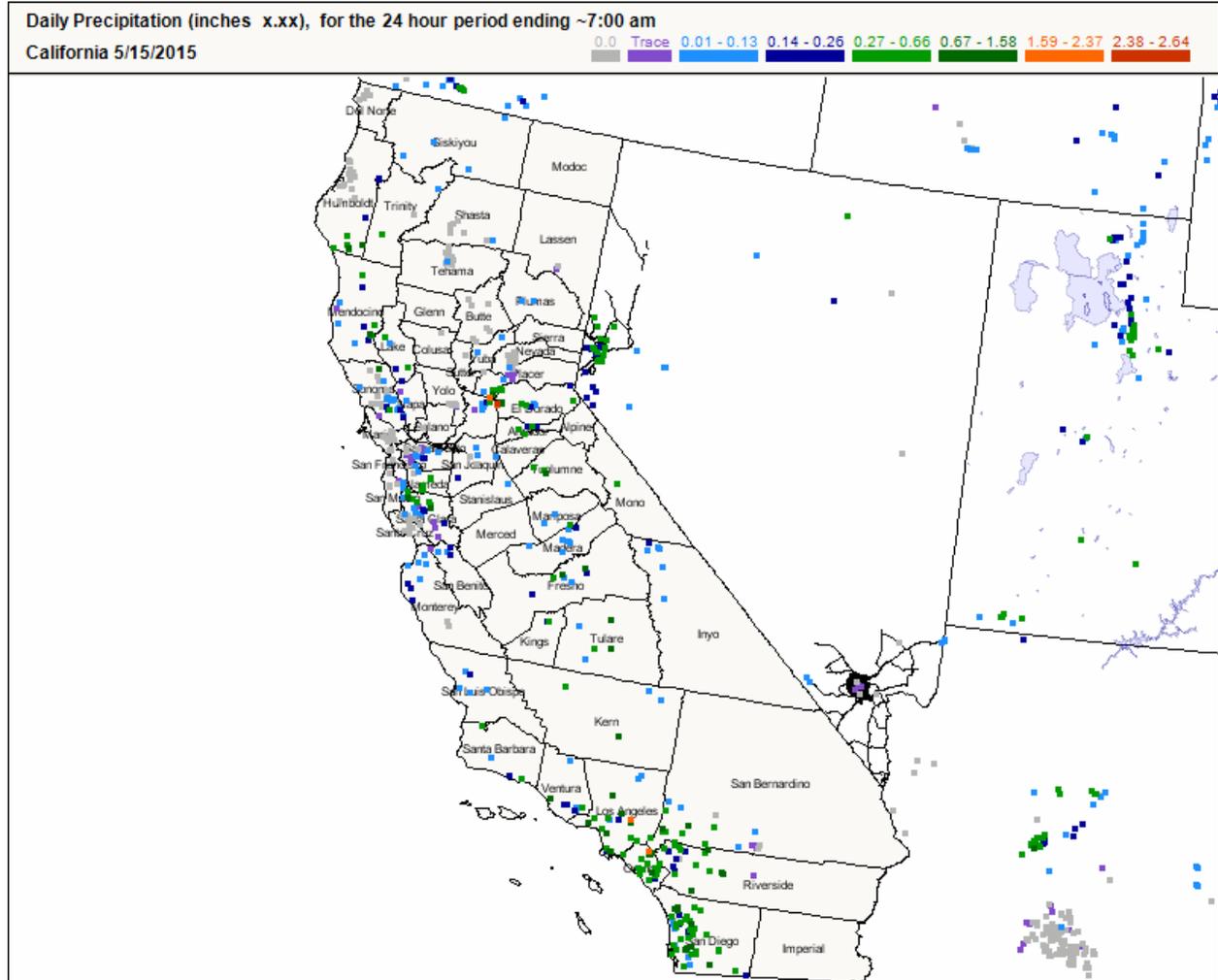
Linear Trend 1895-present	+ 2.43 ± 1.75 °F/100yr	
Linear Trend 1949-present	+ 2.96 ± 4.33 °F/100yr	
Linear Trend 1975-present	+ 3.04 ± 10.00 °F/100yr	
Warmest Year	81.8 °F (+ 8.7 °F) in 2001	MEAN 73.2 °F
Coldest Year	64.2 °F (- 9.0 °F) in 1998	STDEV 3.43 °F
May	2015 70.9 °F (- 2.3 °F)	RANK 36 of 121

California Statewide Minimum Temperature Departure May



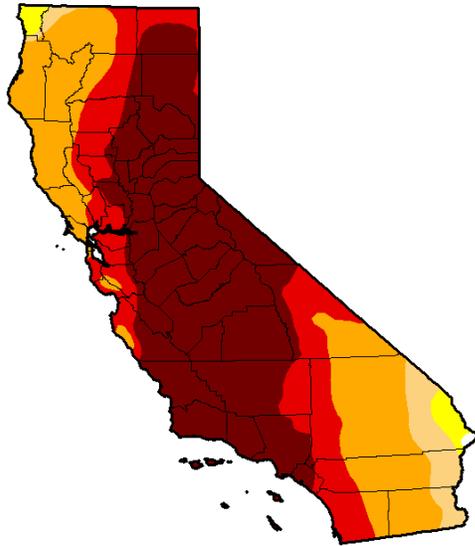
Linear Trend 1895-present	+ 2.70 ± 1.03 °F/100yr	
Linear Trend 1949-present	+ 4.36 ± 2.44 °F/100yr	
Linear Trend 1975-present	+ 5.67 ± 5.62 °F/100yr	
Warmest Year	51.1°F (+ 5.2°F) in 1997	MEAN 45.9 °F
Coldest Year	40.5 °F (- 5.4 °F) in 1908	STDEV 2.05 °F
May	2015 46.9 °F (+ 1.0 °F)	RANK 90 of 121

CoCoRaHS Map



United States Drought Monitor

U.S. Drought Monitor California



April 28, 2015
(Released Thursday, Apr. 30, 2015)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.14	99.86	98.11	93.44	66.60	46.77
Last Week 4/21/2015	0.14	99.86	98.11	93.44	66.60	46.77
3 Months Ago 1/27/2015	0.00	100.00	98.13	94.34	77.52	39.99
Start of Calendar Year 1/20/2014	0.00	100.00	98.12	94.34	77.94	32.21
Start of Water Year 9/30/2014	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago 4/28/2014	0.00	100.00	100.00	96.01	76.68	24.77

Intensity:

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

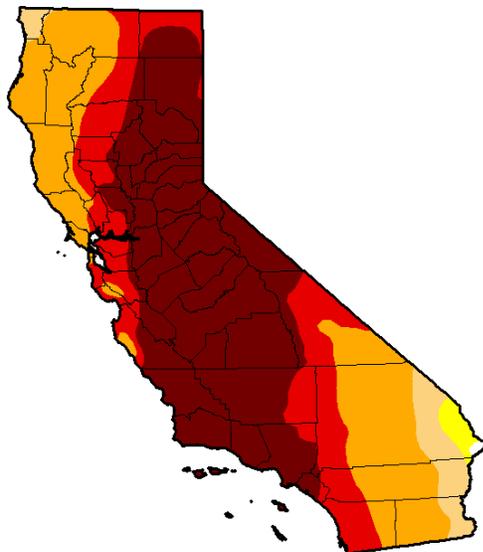
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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

U.S. Drought Monitor California



May 26, 2015
(Released Thursday, May 28, 2015)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.14	99.86	98.71	93.91	66.60	46.73
Last Week 5/19/2015	0.14	99.86	98.28	93.91	66.60	46.77
3 Months Ago 2/24/2015	0.16	99.84	98.10	93.44	67.46	39.92
Start of Calendar Year 1/20/2014	0.00	100.00	98.12	94.34	77.94	32.21
Start of Water Year 9/30/2014	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago 5/27/2014	0.00	100.00	100.00	100.00	76.68	24.77

Intensity:

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